Harmonisation and Mutual Recognition of Regulations and Standards for Food Safety and Quality in Regional Economic Communities

The case of the East African Community (EAC) and the Common Market for Eastern and Southern Africa (COMESA)
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**Acronyms**

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<td>ACP</td>
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Acknowledgements

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Executive summary

This study, conducted by the GIZ sector project “Agricultural Trade” on behalf of the German Ministry for Economic Cooperation and Development (BMZ), analyses the harmonisation and mutual recognition of regulations and standards for food safety and quality in the Regional Economic Communities (RECs) in Sub Sahara Africa. In particular, the East African Community (EAC) and the Common Market for Eastern and Southern Africa (COMESA), which are subject of this study, can report successes with advanced economic integration.

Representing a crucial factor of value chain competitiveness, compliance with regulations and standards for food safety and quality is a prerequisite for accessing markets. This is not only true for opening and maintaining shares in global markets but equally and increasingly for assuring consumer protection while competing with imports in domestic markets; and for seizing, still largely untapped, opportunities in regional markets. Just like the urgent need to improve public and private sector capacities for the surveillance of and compliance with national regulations and standards, regional harmonisation is decisive for the competitiveness in intra and inter-regional trade within and among the RECs. EAC and COMESA have both initiated the development of common Sanitary and Phytosanitary protocols. Aiming at promoting inter- and intraregional trade, both RECs have also started to develop the necessary Quality Infrastructure (QI) and to build the human capacities for compliance with international standard frameworks. Furthermore, with the East African Standards compendium, EAC has developed a comprehensive set of harmonised standards, which COMESA decided to largely adopt in order not to duplicate.

But, even if the legal frameworks may be in place and control institutions mandated in some countries, regulations and standards are hardly implemented along local and regional
value chains (VC). The main reasons are: the lack of awareness of consumers on food safety issues in conjunction with low income levels leading consumers to take buying decisions based on prices and not on (largely invisible) food safety and quality criteria; the limited capacities of national institutions responsible for controlling compliance with plant protection, animal health and food safety provisions to adapt and adopt international or regional standards; and, the lack of awareness on food safety and quality issues and the lack of incentives for VC operators from inputs, through farming, trading and processing up to retailing to invest into good practices and quality assurance systems further to basic visual product quality attributes.

The proposed way forward is quite broad, reflecting the urgent need to develop, revise and harmonise standards/regulations and strengthen the capacities of the national and regional QI but also to address organisational and capacity upgrading needs at VC level. Without developing the capacities of value chain operators, all efforts will fail to increase regional trade and to seize opportunities from existing regional competitive advantages for the sake of food security and pro-poor growth.

For further upgrading and up-scaling the existing structures for food safety and quality assurance within EAC and COMESA and for developing the capacities of public and private sector stakeholders in Member States and at REC-level for implementation, the study gives the following recommendations:

- To upgrade the policy frameworks; referring to policies and public sector organisational structures, to networks at national and regional levels as well as to the representation in international forums and standard setting organisations.
- To upgrade the institutional capacities; referring to the development of organisational capacities of public and private entities having a stake in food safety and quality assurance.
- To improve human resources capacities; referring to skills development of public and private sector individuals with regard to improving their capacities to assuming their sovereign and self-regulation tasks respectively.
- To support cooperation and networking; referring to linkages between operators at certain stages of the VC (horizontal) and along the VC (vertical), to relations between VC operators and service providers and between private and public stakeholders (public-private dialogue), which all provide platforms for capacity development.

Given the current structures and performance of public sector market surveillance and private sector quality assurance systems, still largely characterised by informal production and trade, a gradual bottom-up approach is required to cater for the agri-business reality in Eastern and Southern Africa while building efficient and effective cross-border VCs.
1 Introduction

1.1 Potential of cross-border trade in Africa

With 70% of the population living in rural areas, 65% of employment related to agriculture, agri-trade and agro-industry and with agricultural raw materials and food representing three-quarters of domestic trade, Africa’s path out of poverty and food insecurity remains agriculture-based. Even if the growth of the agricultural Gross Domestic Product (GDP) increased from an annual average of 3% in the 1990s and 2000s to more than 5% in 2008, the countries in Sub-Saharan Africa are not yet seizing existing opportunities: “Given its endowments of land, climate, and labor, Sub-Saharan Africa should have a strong comparative advantage in agriculture. In the face of it, the sub-continent has the resources to both feed its growing population and meet the world’s burgeoning demand for food and other agricultural products (WEF et al., 2011, p.18f).”

Despite this favourable outlook, Sub-Saharan Africa (SSA) is yet vulnerable to periodic food crises. One reason is that infrastructures and political framework conditions for farming, marketing and value-addition do not respond to the needs for assuring food security and for making use of food price rises as experienced in recent years. Another major reason is that regional trade is largely underdeveloped. As a consequence, existing opportunities of agro-ecological complementarities within and between countries and sub-regions remain untapped despite existing possibilities to exploit them for a better balancing between food surplus and food deficit areas.

Even if there are examples of cross-border trade in staple crops such as farmers in eastern Uganda and northern Tanzania serving maize deficit markets in Kenya or farmers in northern Zambia serving maize deficit markets in the Democratic Republic of Congo, the growth potential of regional trade remains underexploited. Rather, repeated export bans such as the one imposed by Tanzania in 2011 in a bid to protecting the domestic market from inflation of maize prices following supply shortages in neighbouring Kenya hinder the stabilisation of markets within the sub-region. The politicisation of such measures is especially counterproductive when considering that trade bans are difficult to enforce where informal trade dominates and that such market interferences create disincentives for producers and traders. This is also the case of Tanzania, where it is often easier and hence more remunerative to trade across borders than to transport staple crops over large distances within the country.

Malfunctioning regional trade is one of the main reasons why most African countries are net importers of food and feed brought in from the international market why the region is vulnerable to volatile global prices. In times of crisis, whether due to climatic conditions (especially extended drought periods) or world market turbulences such as price hikes of food or inputs (fertilizers, seed, feed or fuel for transport from overseas and within the region), time and again food insecurity hence turns into food emergency in SSA countries.

Against this background and an expected drastic rise in the demand of local, regional and global markets in the decades to come, staple crops represent an important growth potential for African economies. However, failing to create incentives for private sector investments both into the production and processing of
food staples on the one side and trading within countries and across national borders on the other side will result in highly volatile supplies and prices given thin national markets that are on their own not capable of balancing between food surplus and food deficit areas.

Since functioning regional markets bear the potential of reducing the dependence from global market supplies and prices, strengthening regional cooperation and promoting cross-border trade in agricultural raw materials and food products will not only contribute to reducing food insecurity across the continent but at the same time contribute to the economic development of still largely rural-based economies. However, to create incentives for farmers to produce, traders to collect and distribute and processors to add value to agricultural raw materials, access to growing markets, both domestic and across national borders will be essential. Improving political and legal frameworks and upgrading the regional market and trade infrastructure will enable farmers, traders and processors to develop cross-border market linkages, open new markets and consequently benefit from scale economies.

1.2 Regional Economic Communities and barriers to regional trade

Increasingly recognising the key role, cross-border trade and regional cooperation play for the development of national economies and the competitiveness of economic sectors, the formalisation of the African Union (AU) in 2002 as well as the food price hikes and food crises in recent years gave fresh impetus to the further development of the partly long-time existing Regional Economic Communities (RECs) in SSA. In this respect, the East African Community (EAC) and the Common Market for Eastern and Southern Africa (COMESA), which are subject of this study, can report successes with advanced economic integration.

However, despite the progress in realising Free Trade Agreements (FTA) and establishing customs unions, much remains to be done since the success stories on the one side are accompanied and threatened by lack of commitment on the part of public and private stakeholders, by the emergence of new Non-Tariff Barriers (NTB) to trade and by shortcomings in the Quality Infrastructure at regional and national levels on the other side.

Export and import bans, licensing and quotas, cumbersome border procedures with multiple official and unofficial charges, poor transport infrastructure and logistics, restrictive rules of origin, lack of systems for mutual recognition of testing, certification and inspection, unsound national and not yet harmonised regulations and standards, inefficiencies in border control, laboratory and other relevant services add considerably to the transaction costs of regional trade. NTBs thus bear on the competitiveness of goods sourced in the region. Removing these barriers is a major task for the RECs and will unlock opportunities for agribusiness operators and traders to better exploit existing competitive advantages.

Special attention has to be paid to the fact that about 80% of trade in agricultural raw materials and food in SSA is informal (Pannhausen and Untied, 2010, p.1) mainly due to highly fragmented value chains and resulting small volumes traded, to poor transport and market
1.3 The Comprehensive Africa Agriculture Development Programme (CAADP) and the Enhanced Integrated Framework (EIF)

"Nobody is food self-sufficient in the region. We need to develop markets. The bottom line is that markets, if developed, work better than subsidies or some price controls governments are bringing (Govere, 2011)." Structures and systems for farming, marketing and value-addition in large parts of SSA do not respond to the needs for creating competitive value chains. Prevalent low on-farm productivity, malfunctioning market linkages between food surplus and food deficit areas, high wastage along production-to-market distribution channels and chronic underutilisation of established processing capacities are part of a vicious circle of low performance, low proceeds for farmers and other agri-business operators, high risk of food hazards to public health and a decline in assets that hinders necessary investments into building value chains (VC).

This, in combination with development policies, that so far underestimated the need for a transition to more market-oriented and more commercially-oriented small (and also medium) scale farming systems, reliable marketing linkages as well as resourceful value addition to assuring food security and achieving pro-poor growth, left the Sub-Saharan agri-business sector loosing competitiveness and market shares in domestic, regional and global markets. To escape this development trap requires radical changes in national, regional and international policies setting more favourable conditions for private sector driven agricultural and rural development as well as trade in agri-food products.
The New Partnership for Africa’s Development (NEPAD), a programme of the African Union (AU), has taken the lead in making necessary changes possible: “Recognising that agriculture is the mainstay of most African economies, NEPAD has taken the lead in highlighting the critical role agriculture must play in successful efforts to reduce food insecurity and poverty. The Comprehensive Africa Agriculture Development Programme (CAADP) is the NEPAD protocol for development of the agriculture sector in Africa (NEPAD, 2010, p. 2).” With a view to mobilising international and national public-private partnerships for investment into agricultural development, CAADP supports African countries to develop National and Regional Compacts, defined as “an agreement between major stakeholders and the ministry of agriculture, the ministry of finance and donors on the priorities and strategy for a country’s agricultural development programme (ibid., p. 9).”

In this line of thinking, the objective of CAADP pillar 2 ‘market access’, is to:

- accelerate growth in the agricultural sector by raising the capacities of private entrepreneurs, including commercial and smallholder farmers; and
- meet the increasingly complex quality and logistics requirements of domestic, regional, and international markets.

By doing so, the pillar agenda focuses on policy and regulatory actions, infrastructure development, capacity-building efforts, and partnerships and alliances that could facilitate smallholder friendly development of agricultural value chains to stimulate poverty-reducing growth across African countries.

Recognising the importance of trade between countries and of regional cooperation for building a stronger and more sustainable African economy, NEPAD furthermore supports the advancement and the growing together of existing Regional Economic Communities. The main objective of NEPAD is to create awareness on the benefits of regional cooperation and to support the RECs to build joint trade infrastructure and capacities for regional trade.

With special focus on the trade agenda and in close cooperation with NEPAD, the Enhanced Integrated Framework (EIF) supports least developed countries (LDCs) in SSA and other continents to address supply-side constraints to trade. The Integrated Framework was set up in 1997 by the World Trade Organisation (WTO) and renamed into Enhanced Integrated Framework following a review in 2005. The Aid for Trade partnership of the EIF programme is supported by a Multi-Donor Trust Fund with contributions from 23 donors. The Trust Fund is managed by the United Nations Office for Project Services (UNOPS).

The EIF aims to coordinate and strengthen donors’ support to the trade agenda of beneficiary countries by inviting LDCs to use the instrument as a vehicle to coordinate support of development partners and to lever additional Aid for Trade resources, and by facilitating donors to sign up to the EIF as a vehicle to deliver on their Aid for Trade commitments. The main objectives of the EIF are to:

- mainstream trade into national development strategies;
- set up structures needed to coordinate the delivery of trade-related technical assistance; and
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1.4 Objectives of the study

Representing a crucial factor of value chain competitiveness, compliance with regulations and standards for food safety and quality is a prerequisite for accessing markets and hence for achieving the CAADP pillar 2 and the EIF objectives. This is not only true for opening and maintaining shares in global markets but equally and increasingly for assuring consumer protection and public health while competing with imports in domestic markets and for seizing, still largely untapped, opportunities in regional markets. Just like the urgent need to improve public and private sector capacities for the development and surveillance of and compliance with national regulations and standards, regional harmonisation is decisive for the competitiveness in intra- and inter-regional trade within and among the Regional Economic Communities.

As a primary objective, the study aims at facilitating public and private stakeholders as well as development partners in EAC and COMESA to better understand:

- the current status of national and regional regulatory protocols and standard systems;
- the regional institutional setup for developing regulations and setting standards as well as for private sector compliance and public sector market surveillance;
- the current status of harmonisation at the level of the RECs, i.e. in EAC and COMESA;
- the specific challenges and opportunities concerning the selected value chains; and
- the challenges and opportunities for upgrading regulatory protocols and standard schemes as well as developing the necessary institutional and human resources capacities.

As regards strategic orientation and action planning for upgrading regulatory and standards frameworks, the results of the study are furthermore supposed to assist:

- governmental, private and civil-society stakeholders in EAC and COMESA countries to identify investment opportunities for upgrading regulatory and standard protocols under the CAADP National and Regional Compacts;
- bilateral and multilateral projects and programmes implemented by BMZ/GIZ and other development partners to identify areas for support to standard development at Member State level and harmonisation for cross-border trade within the Eastern and Southern African RECs; and
- the GIZ Sector Project Agricultural Trade to identify areas for support to standard harmonisation and up-scaling of standards within the Eastern and Southern African RECs.

- build capacity to trade, which also includes addressing critical supply-side constraints.

Aiming at building capacities on regulations and standards for food safety and quality for cross-border trade in Africa the GIZ Sector Project Agricultural Trade commissioned a rapid assessment of the current situation of the development of national public mandatory regulations as well as public and private voluntary standards and the regional harmonisation of the respective protocols within EAC and COMESA. The study focuses on five strategic value chains that are cassava, coffee, dairy, horticulture and maize; and six countries, namely Ethiopia, Kenya, Rwanda, South Sudan, Tanzania and Uganda. Results have been incorporated in a CAADP Value Chain Training which has been supported by GIZ in June 2011.
2 Some basics on regulations and standards

2.1 Forms, functions and levels of regulations and standards

According to the World Trade Organization (WTO), key terms are defined as follows (for definitions of terms see glossary above):

- A technical regulation is a document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory.
- A standard is a document approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory.
- A conformity assessment procedure is any procedure used, directly or indirectly, to determine that relevant requirements in technical regulations or standards are fulfilled. Conformity assessment procedures include testing, certification, inspection and accreditation.
- A Mutual Recognition Agreement (MRA) is the formal recognition that the inspection and certification system of one country is equivalent to that of the partner country. With accepting that the inspection and certification system of one country provides the same level of protection, controls in the importing country can be reduced.

In a bid to distinguish between food safety and food quality, FAO and WHO define as follows:

- Food safety refers to all characteristics that are not negotiable, namely food hazards, whether chronic or acute, that may make food injurious to the health of consumers (e.g. microbiological hazards, pesticide residues, misuse of food additives, chemical contaminants, including biological toxins, and adulteration).
- Food quality includes all other product attributes that influence a product’s value for consumers, including positive attributes such as the origin, colour, flavour, texture and processing method of the food and negative attributes such as spoilage, contamination with filth, discoloration, off-odours.

There is no clear-cut definition whether ‘standards’ comprise both regulations, which are understood as sovereign tasks (also referred to as mandatory standards) and public/private voluntary standards. Some argue that standards are by definition voluntary and regulations hence cannot be standards. Disregarding this semantic discussion, the following table gives an overview on the different forms of standards and regulations as they are used in this paper.

<table>
<thead>
<tr>
<th>Type</th>
<th>Public</th>
<th>Private</th>
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<tbody>
<tr>
<td>Mandatory</td>
<td>Regulations</td>
<td>Legally mandated standards*</td>
</tr>
<tr>
<td>Voluntary</td>
<td>Public standards</td>
<td>standards</td>
</tr>
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</table>

Table 1: Forms of regulations and standards

*Legally-mandated standards: standards set by private entities and adopted and enforced by governments (e.g. certain ISO standards)
Adopting this classification, the following categories can be distinguished for food safety and quality regulations and standards:

Public regulations and standards:

- Sanitary and Phytosanitary (SPS) regulations: SPS provisions are mandatory measures covering food safety aspects with the primary objective of protecting human, animal and plant life and health.
- For members of the World Trade Organization (WTO), the development of SPS measures is guided by the following three WTO-recognised standard setting organisations, the so-called ‘three sisters’:
  - Codex Alimentarius Commission (CAC) of the Food and Agricultural Organization (FAO) and the World Health Organization (WHO);
  - International Plant Protection Convention (IPPC);
  - World Organisation for Animal Health (OIE).
- Technical regulations and standards: Technical regulations and standards refer to mandatory or voluntary food quality aspects and conformity assessment requirements (e.g. standards developed by the International Organization for Standardization (ISO) and/or National Standardisation Organisations):
  - Regulations and standards for food quality: partly mandatory (e.g. minimum quality requirements such as size, colour, weight, nutritional requirements, label content and formats, etc.), partly voluntary (e.g. East African Organic Standard and Mark) since their application is voluntary but has to follow the East African Organic Standard once it is applied.
  - Regulations for conformity assessment (Quality Infrastructure): obligations and guidelines for inspection, methods of sampling, measuring and testing, analysis, accreditation and certification.

Private voluntary standards that are:

- Commercial trade and industry standards: Private trade and industry standards are developed by individual firms (corporate standards) or by business networks and associations (collective standards, usually pre-competitive) in a bid to homogenize product attributes and to facilitate the coordination of market transactions or to differentiate products; examples: GlobalGAP/KenyaGAP, Tesco Nature’s Choice, Ethiopian Horticulture Producers and Exporters Association (EHPEA) Code of Practice for Sustainable Flower Production, etc.
- Third party standard schemes used by trade and industry: Non-commercial third party standards are usually developed by non-governmental organisations and cover sustainability issues or address specific social and ecological issues; examples: Fair Trade, Rainforest Alliance, Utz Certified, organic (e.g. Demeter, Naturland), etc.
2.2 Linkages between international, regional and national standard systems

Four levels of standard ruling/standard setting organisations can be distinguished in general (for a better understanding of the different institutional levels, examples are given for Eastern and Southern Africa):

- multilateral organisations, in particular the WTO and the WTO-recognised multilateral standards set by the Codex Alimentarius Commission, the International Plant Protection Convention and the World Organisation for Animal Health;
- regional (or supranational) standard setting organisations (e.g. trading blocs such as the African Union, COMESA and EAC);
- national standard setting organisations such as National Bureaus of Standards and subsector-specific national organisations such as Coffee or Dairy Authorities or Boards;
- private industry and trade standard setting corporations or organisations such as the East African Business Council (EABC), the East African Grain Council (EAGC) at the regional level or the Fresh Produce Exporters Association of Kenya (FPEAK) at the national level.

The following graph exemplifies the linkages between these different levels for selected food standards and regulations applied in Kenya.

Graph 1: Standard levels relevant for food regulations and standards applied in Kenya

Multilateral standards serve as reference for developing regional and national standards. The development of national regulations and standards (just like the development of regional standards) shall in the first instance be guided by relevant multilateral standard set by bodies such as CAC, OIE and IPPC while they may be adapted to suit the prevailing national food safety and quality situation. The same applies for regional standards guiding the development of national standards and regulations. Such references are meant to harmonise regional and national standards with a view to facilitating trade.

It can be observed that mandatory and voluntary standards become increasingly interlinked. Nowadays, multilateral standards have an increasing impact on standardisation policies at other levels:

- Standards elaborated by CAC, IPPC, OIE are recognised by the World Trade Organization (WTO), which by itself is not a standard setting but a standard ruling organisation. Members of the WTO have to adapt their standardisation policies at regional and national levels based on these references.
- Standards elaborated by the International Organization for Standardization (ISO) as well as Codes of Good Practice elaborated by the Organisation for Economic Cooperation and Development (OECD), the International Electrotechnical Commission (IEC) or the United Nations Economic Commission for Europe (UN/ECE) at multilateral level have become an integral part of ever-more standards at all levels.
- Voluntary standards increasingly become de facto requirements (‘soft law’; see glossary for a definition) for producers, processors and distributors as their importance for competitiveness in international markets has significantly increased over time.

2.3 Scope of food safety and quality regulations and standards

With a view to assuring consumers’ access to safe and high quality food, regulations and standards cover a very broad spectrum of issues along entire value chains (VC), from farm to fork. Further to producers, processors and traders, quite a range of operational service providers have to comply as well with food safety and quality regulations and standards: transporters and distributors, brokers and middlemen, laboratories providing food safety services as well as production and processing equipment and food packaging material manufacturers.

Even if this study does not cover the entire scope of food safety and quality regulations and standards, it is worthwhile bearing in mind that both the development and enforcement on the side of regulators and standard owners as well as the adoption of necessary capacities for compliance on the side of value chain operators is more than challenging, especially in countries with a smallholder-dominated agri-business sector on the one end and poor consumers at the other end of the value chain.

Slowly but surely, stakeholders in developing countries start to realise the importance of food safety and quality assurance systems for the competitiveness of value chains and for public health. Nevertheless, food safety and quality are often at stake since even if national legal standards are in place they are hardly known by VC operators (problem of information) and almost
not implemented (problem of enforcement). Another challenge is that the market in most developing countries is split at least into three categories:

- growers and traders involved in exports have to comply to ever more strict international legal as well as private trade and industry standards;
- products supplied to supermarkets in the domestic market are controlled more strictly with regard to product quality and food safety; [while]
- operators distributing through other local or regional channels usually do not apply any standards.

However, awareness on the need to developing efficient and effective regulatory and standard protocols is growing due to incidences of threats to public health and unnecessary wastage along VCs bearing on unit costs and hence on consumer prices. Furthermore, high transaction costs caused by the lack of quality assurance along the production-to-market chains, ever-stricter control of product quality by supermarkets and opportunities arising from cross-border trade contribute to creating a better understanding of the role and benefits of regulations and standards. In several countries and at the level of the Regional Economic Communities, public and private stakeholders start joining forces for taking up these challenges in a common effort.

2.4 Drivers for the development of regulations and standards

The development of regulations and standards is driven by partly complementing, partly conflicting public sector, civil society and private business interests. Objectives range from assuring public health and consumer protection, improving competitiveness and increasing profits, raising worker productivity and improving worker health, protecting the environment and guaranteeing the sustainable use of natural resources.

The increasing importance of public mandatory regulations as well as voluntary standards is mainly driven by (adapted from Henson and Humphrey (2009, p.iv):

- real and/or perceived risks along food VCs resulting from food safety incidences and increasing consumer concerns;
- increased interest of large-scale retailers and processors to use standards for differentiation strategies using attributes such as provenance, environmental and social impacts for raising their competitiveness;
- increased need for coordinating processes along global VCs and controlling emerging new risks and new challenges for food safety and food quality; and
- expanded responsibility of VC operators for assuring food safety and quality has been transferred by governments towards the private sector by stipulating the rule of primary responsibility of food operators for food safety (due diligence obligation).

Besides the long-standing drivers for standard development, the recent food price hikes and their underlying reasons (global supply short-
ages, climate change, competition for land resources, volatile input prices, to mention the most important and prospective consequences (especially food insecurity in some parts of the world and the rising need for establishing consistent and cost-efficient production-to-market linkages) give new impetus to the development of new as well as the revision and harmonisation of existing public and private standards. The following graph illustrates the context between economically viable, environmentally sound and socially equitable agro-food sector development on the one hand and the old and new drivers for standard development on the other hand.

Graph 2: Drivers for regulations and standards

Long-standing drivers for standard development:
- mounting food safety incidences:
  growing parts of populations in developed and developing countries affected
- increasing competition:
  globalisation, surplus production, competitive edge through product differentiation
- demanding consumers:
  changing preferences (convenience, health, brands), food safety concerns
- advancing technologies:
  transport and logistics, production and processing, information and communication
- rising environmental and social awareness:
  labour conditions, worker health, environmental protection, fair trade

Renewed global attention to sustainable agro-food sector development:

Emerging drivers for standard development and revision:
- global food security and the right to food:
  the financial and economic crisis and the G8 commitment to global food security
- climate change and sustainable agro-ecosystems:
  mitigation and adaptation strategies, carbon footprints, biodiversity conservation
- foreign direct investments and competition for land resources:
  national agricultural policies, foreign direct investments and the issue of ‘land grabbing’
- business alliances and supply chain efficiency:
  preferred suppliers and cooperation to reduce transaction costs and assure traceability
- corporate social responsibility for scaling up and trickling down:
  food miles versus fair miles, community involvement, equitable chain governance
- integration into Regional Economic Communities (RECs):
  harmonisation of regulations, standards and the quality infrastructure

Source: Will (2011, p.119)
2.5 Costs and benefits of regulations and standards

While compliance with pertinent regulations and standards can bear clear benefits for value chain operators and society, achieving compliance can be quite challenging and costly given the need to invest into infrastructure, equipment as well as institutional and human capacity development.

Yet, if appropriately designed and necessary institutional and individual capacities developed, regulations and standards can contribute to the following benefits:

**Micro-economic (commercial) perspective – enhanced market access and increased returns:**
- increase in productivity, quality and reduction of wastage resulting in higher sales volumes;
- (potential) access to higher-end markets/higher price segments/sometimes price premiums;
- improvement of VC governance structures, especially more equitable distribution of profit margins for smallholder farmers;
- reduction of investment risks through the optimisation of processes at all stages of the VC;
- reduction of unit production, handling and processing costs e.g. thanks to reduced wastage and better informed decisions on the use of inputs (e.g. integrated pest management);
- reduction of transaction costs through the facilitation of supplier-customer negotiations based on clear process/product specifications;
- reduction of the risk of rejection of end-products;
- reduction of the administrative burden in domestic, cross-border and international trade; and
- potential reduction of the frequency of inspections.

**Macro-economic perspective – improved national competitiveness:**
- (potential) improvement of the national trade-balance and growth of national income;
- generation of spill-over effects within VCs thanks to incentives for the modernisation of the VC; and
- generation of spill-over effects to other VCs and to other economic sectors.

**Societal and environmental perspective – public health, worker health and environmental protection:**
- protection of consumers’ and public health (e.g. reduction of food-borne diseases);
- protection of farmers’ and workers’ health (e.g. safe use of pesticides); and
- protection of the environment (e.g. reduced fertilizer and pesticide effects on groundwater and soils; more efficient and hence more sustainable use of natural resources).

However, benefits may be outweighed by costs of compliance and risks accruing from protectionist use of standards.

**Macro-economic perspective:**
- initial investments (non-recurrent) into the quality infrastructure (technologies, institutional development and capacity building); and
- recurrent operational costs of the quality infrastructure and for continuous capacity building for staff of public control bodies.
Micro-economic perspective:
- initial investments (non-recurrent) at all stages of the VC (technologies, capacity building);
- market exclusion;
- recurrent costs for additional work load and continuous capacity building for compliance; and
- risk of negative effects on transaction costs and hence on VC competitiveness.

Macro- and micro-economic perspective:
- risk of a discriminatory/protectionist use of regulations or standards as Non-Tariff Barriers (NTB) hampering the exploitation of trade opportunities.
- Proliferation of standards and regulations.

Concluding, even if compliance costs may finally prove to be small relative to the prospective return on investments (benefits), the success of any effort to upgrading private sector supply chain quality assurance systems and public sector institutions within the national quality infrastructure depends on the willingness to commit resources, the possibilities to bridge the financing gap between short-term costs of compliance and medium-to-long term return on investments and finally the capacities to take necessary investment decisions.

In the end, the successful implementation of regulations and standards will largely depend on a cost-benefit-‘plus’ for value chain operators and the society. Clarity on costs and benefits of compliance with regulations and standards will be decisive determinants for value chain operators’ decisions on investments into assurance systems for food safety and quality and for public sector investments into developing the necessary capacities for enforcement. It is obvious that necessary investment decisions need to be based on a sound cost-benefit-analysis (see section 4.4.1 for recommendations).
3 Regulations and standards for selected value chains in EAC and COMESA

Given the broad scope of the research task cutting across two RECs, six countries (Ethiopia, Kenya, Rwanda, South Sudan, Tanzania and Uganda) and five strategic value chains (cassava, coffee, dairy, horticulture and maize), this study does not claim to be comprehensive. The study is based on a rapid assessment through internet/desk research and meetings with a small number of experts at the headquarters of COMESA and EAC and at the national level in two of the six selected countries during a mission to Zambia, Tanzania, Ethiopia and Kenya. The interested reader requiring more in-depth information is therefore kindly requested to refer to the quite extensive bibliography provided below.

3.1 Overview on the status of harmonisation and mutual recognition within EAC, COMESA and the Tripartite COMESA-EAC-SADC

Only in recent years and reinforced by the so-called food crisis, awareness is growing that countries in Sub-Saharan Africa can gain much from increased regional trade and the establishment of regional Free Trade Agreements despite the similarity of endowments between countries in the sub-region.

The Africa Competitiveness Report 2011 confirms this standpoint: “Regional integration can help African countries become more competitive and resilient to external shocks, as the recent experience of East Africa during the global financial crisis illustrates.” (AIP, 2011) “The continued healthy growth rates in the sub-region protected the individual countries from the major drop in demand that proved so damaging to developed and emerging economies elsewhere. The crisis has only reinforced the East African countries’ drive to integrate; the common market [of the EAC] introduced in 2010 is also likely to boost trade further (WEF, 2011, p.17).”

Growing regional trade, though, presents new challenges in many aspects, of which one is to assure food safety and quality from farm to fork, along entire cross-border value chains. In a bid to protect human, animal and plant health and life in cross-border trade, EAC and COMESA have both initiated the development of common Sanitary and Phytosanitary protocols. Aiming at promoting inter- and intra-regional trade, both RECs have also started to develop the necessary Quality Infrastructure (QI) and to build the human capacities for compliance and mutual recognition to meet the basic requirements of the WTO SPS Agreement. Furthermore, EAC has developed East African Standards (EAS), a comprehensive set of harmonised technical (mandatory) regulations and (voluntary) standards. Partner States are obliged to adopt these provisions and, by doing so, will assure a smooth functioning of the common market. COMESA decided to largely adopt the EAC standards in order not to duplicate.

In general, there is no need to newly develop regional regulations and standards if international standards (WTO-recognised and others) present appropriate provisions. However, given the specific conditions in Sub-Saharan Africa (e.g. structures and performance of a smallholder dominated agricultural sector, fragmented value chain linkages, limited processing capaci-
ties and largely outdated technologies, principally informal trade, weak transport and logistics infrastructure, partly outdated legislation, overlapping mandates and weak enforcement capacities, not to speak about agro-climatic conditions), procedures and capacities have to be in place to adapt international standards to regional needs and absorption capacities. If no appropriate international provisions are available (e.g. in the case of teff, a cereal endemic to Ethiopia; or cassava, see section 3.2.1), regional-specific regulations and standards have to be developed that respond adequately to the prevailing conditions and requirements.

3.1.1 SPS Measures (public mandatory regulations)
Aspiring to assure free internal circulation of goods through harmonised border measures within their customs unions, COMESA and EAC have both drafted common protocols for Sanitary and Phytoanitary Measures (SPS). Despite the crucial role SPS play for promoting cross-border trade while assuring food safety, the two protocols were only supposed to be approved by the respective Councils of Ministers by May 2011. Once approved at REC-level, it will be a major challenge and will supposedly take years before the relevant legal and institutional frameworks will be upgraded and the necessary compliance and control capacities among private and public stakeholders will be developed at Member States’ level.

In export-oriented subsectors and countries such as horticulture in Kenya, SPS capacities have been built in response to export market access requirements. Otherwise, even if the legal frameworks may be in place and control institutions mandated in some countries, SPS regulations and standards are hardly implemented along local and regional value chains. The main reasons are: in the first instance, the lack of awareness of consumers (and literally all VC operators) on food safety issues in conjunction with low income levels leading consumers to take buying decisions based on prices and not on (largely invisible) food safety and quality criteria; in the second instance, the limited capacities of national institutions responsible for controlling compliance with plant protection, animal health and food safety provisions to adapt and adopt international or regional standards not to speak about to enforce (existing) national regulations and standards; and thirdly, the lack of awareness on food safety and quality issues and the lack of incentives for VC operators from inputs, through farming, trading and processing up to retailing to invest into good practices and quality assurance systems further to basic visual product quality attributes.

However, with the commitment of COMESA and EAC to harmonise SPS measures and assist Member States to adopt food safety systems, with growing awareness of consumers on food safety issues as well as increasing understanding of some VC operators on the (potential) cost-benefit ‘plus’ of assuring food safety and quality along VCs for accessing domestic, regional and international markets, SPS measures will slowly but surely gain importance.

As will be explained below, both COMESA with its proposed ‘Green Pass’ certification system and EAC with its Protocol on SPS Measures move forward with establishing streamlined and regionally harmonised procedures with the objective to facilitating trade while protecting human, plant, and animal health. However, both protocols only exist as drafts and imple-
mplementation has not yet taken off. Given the current status of food safety provisions in Member States of both RECs, it can be assumed that it will take years before agri-food products supplied to domestic markets and traded across borders will be compliant with SPS provisions.

The following table gives an overview on the main goals stipulated in the respective agriculture chapters of the EAC and COMESA treaties as well as on agriculture and SPS related policies and regulations.

Table 2: Agricultural/SPS-related efforts within the regional blocs

<table>
<thead>
<tr>
<th>RTAs</th>
<th>Agriculture chapter</th>
<th>Main aspects</th>
<th>Related policies/strategies</th>
<th>Specific to SPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMESA</td>
<td>Main goals: rural development, export of commodities</td>
<td>Co-operation, harmonisation</td>
<td>Agricultural Development Strategy; Agro-processing Sector Strategy (in progress); Standardization and Quality Assurance (SQA) Policy (proposal); Regional COMESA CAADP Compact (to be carried over into a Tripartite Regional CAADP Compact involving COMESA-EAC-SADC)</td>
<td>Regulations on the Application of Sanitary and Phytosanitary Measures (draft, due for ratification); COMESA Regional Compact outlining key interventions among others for SPS Measures</td>
</tr>
</tbody>
</table>

Source: adapted from Fulponi et.al. (2011, p.35) with additions of the author

EAC’s approach to SPS measures is said to centre more on food security and rural development than on competitiveness and trade, while COMESA’s draft SPS protocol is clearly geared towards promoting exports (Fulponi et.al., 2011, p.35).

COMESA’s Regulation on the Application of SPS measures
The draft COMESA SPS Logical Protocol, which is not yet implemented but supposed to be approved by the Council of Ministers by mid 2011, proposes four result areas (COMESA, n.d., p.6):

- common certification schemes/protocols and private sector driven regional standards adopted for selected food and agricultural products;
- monitoring, surveillance and emergency preparedness programmes established for priority animal diseases and plant pests;
- SPS information exchange improved within and among RECs and between public and private sector, at national and regional level; and
- improved regional leadership, coordination and collaboration on SPS issues.
Although thus far not implemented, COMESA’s SPS Protocol signifies an important step towards the adoption of SPS-obligations stipulated in the WTO principles by proposing common approaches for:

- setting up structures and procedures for supporting equivalence and risk analysis;
- developing mechanisms for monitoring and surveillance of human food-borne illnesses and zoonoses;
- establishing reference laboratories (three reference laboratories are already in place: for animal health in Zambia, for plant health in Mauritius and for food safety in Kenya);
- adopting measures for zonation and compartmentalisation as outlined in the OIE regulations (zonation and compartmentalisation offer the opportunity to continue trading from disease-free compartments during periods of disease outbreak in a country or zone; through adherence to strict biocontainment procedures, record keeping and trading partner agreements);
- agreeing on commitments relating to pesticides, quarantine, adoption of good agriculture practices (GAP) and good manufacturing practices (GMP), phytosanitary inspections and the establishment of early warning system, etc.;
- recommending the adoption of HACCP (Hazard Analysis and Critical Control Point) principles and pre-requisites;
- recommending the application of traceability systems.

The draft SPS Protocol assigns special responsibility to COMESA’s SPS Unit in promoting compliance with SPS Measures and in guiding Member States in the process of adopting the Protocol.

While proposing principles and approaches for adoption by Member States, the SPS Protocol still needs to be translated into country-specific systems. However, the ‘Green Pass’ (see box below) is supposed to guide commodity-specific adoption by proposing a certification system that will facilitate mutual recognition and hence cross-border trade in agricultural commodities.

The COMESA Green Pass (CGP) provides for region-specific product and process standards encompassing the entire value chain. The CGP is meant to facilitate the verification of equivalence and mutual recognition in international, inter- and intraregional trade. According to COMESA representatives, requirements of international private voluntary standards such as GlobalGAP or British Retail Consortium (BRC) are incorporated into the COMESA Green Pass certification system.
According to COMESA (n.d., p.6f), the following preconditions must be in place to assure adaptation of the COMESA Green Pass Certification System to the prevailing conditions in Member States:

- stakeholders have to understand commodity markets and know the commodity-specific SPS issues that need to be addressed (e.g. whether food safety, plant health or animal health issues constitute a potential barrier to trade);
- stakeholders have to know the SPS systems of countries to which the commodity may be exported and may hence be affected by the SPS measures taken;
- stakeholders have to understand which SPS areas need to be addressed by private and public sector actors so as to establish a level of confidence between trade partners that SPS issues are managed; and
- stakeholders have to assure that all SPS measures that may be relevant for cross-border (and international) trade form an integral part of the ‘Green Pass Certification System’.

EAC’s Protocol on SPS Measures

With a view to promoting trade within the Community, Article 108 of the EAC Treaty and Article 38 of the Customs Union Protocol stipulate the obligation for Member States to harmonise standards and hence also SPS Measures (principle of subsidiarity as laid down in Paragraph 1 of Article 151 of the Treaty).

The EAC SPS Protocol has been developed in a broad-based stakeholder participation and consultation process under the guidance of the EAC SPS Committee and implemented through national level food safety committees bringing together relevant public and private stakeholders.

For the objectives of the EAC SPS provisions see box 2 below.
The volumes specify rules for application for imports and exports to be observed by exporters, importers, border inspection and other control services (for details see Edewa, 2011). Pending provisions to be developed are: Maximum Residue Limits (MRLs), animal feeds, veterinary drugs and seeds.

EAC’s strategy and procedures for harmonising Member States’ measures for the control of animal diseases and zoonoses may serve as an example for the community’s approach to implementing the rules of application for SPS. The following EAC Animal Disease Control Coordination Instruments have been developed to date:

- Draft EAC Strategy on Transboundary Disease Control and Zoonosis;
- main features: early detection-early response to disease situations; coordination mechanism through regional Steering and Technical Management Committees and expert groups;
- Draft EAC Contingency Plan on Avian Influenza and other Transboundary Animal Diseases (TAD);

Once ratified, “... Partner States have to revise their national trade policies to be in line with the requirements of the SPS protocol ... as all countries have committed to accept EAC protocols, laws and legislations to supersede the national ones. The main challenge for the EAC is then to make sure that there is enough political will and commitment from all Partner States and the different level of current national capacities does not hamper the regional harmonization effort (Edewa, 2011, p.43)”. 

So far, the EAC has developed four volumes (status first half-year 2011):

- harmonised phytosanitary measures and procedures for plants (Volume I);
- harmonised sanitary measures and procedures for mammals, birds and bees (Volume II);
- harmonised sanitary measures and procedures for fish and fishery products (Volume III); and
- harmonised measures on food safety (Volume IV).

### Box 2: Objectives of the EAC SPS Protocol

- Establish a protocol of rules and disciplines to guide the development, adoption, enforcement and harmonization of SPS Measures within the Community and to further implement the principles and provisions of the WTO SPS agreement.
- Establish a protocol for operation and implementation for the Community Harmonised SPS Measures within the Community.
- Ensure transparency in application of SPS Measures applicable to trade.
- Establish an instrument for recognition of equivalence of SPS Measures among Partner States.
- Apply the principles of regionalization.
- Establish various instruments and procedures for trade facilitation.
- Promote communication and cooperation between Partner States on SPS Measures.
- Promote trade within and outside the Partner States.

Source: Edewa (2011, p.42, verbatim citation)
3.1.2 Technical regulations and standards

Among the Sub Saharan Regional Economic Communities, the EAC is leading in developing common technical regulations and standards. The main objectives are to realise the Common Market (in force since 2010) and the Monetary Union (expected to coming into force by 2012).

Based on the EAC Standardization, Quality Assurance, Metrology and Testing (SQMT) Act (2006), the East African Standards Committee (EASC) assumes responsibility for the development of technical regulations and standards (EAC, n.d.). In a bid to develop regional standards in a “cost-effective and timely, as well as widely recognised and generally applied” way, the EASC has established Procedures for the Development of East African Standards (EASC, 2010, p.ii). Since the Catalogue of East African Standards (EAS) supersede national regulations and standards, Partner States are obliged to adopt EAC standards.

Despite these achievements (and similar achievements in other areas of food safety concern), the processes of drafting and approving the SPS Protocol has been slow. According to Edewa (2011, p.41), the main reasons are that (i) EAC did not establish a SPS-Unit at the level of the Secretariat (in contrast COMESA has established a SPS-Unit); and that (ii) resources are hence limited since responsibility and tasks related to SPS measures are assumed by staff responsible in parallel to other obligations. As a consequence, several provisions described in the annexes to the SPS Protocol have become obsolete and need to be revised. It was expected that the processes for approval and adoption by Member States would be enhanced by the entry into force of the EAC Common Market (July 2010), however, by May 2011 the draft EAC Protocol on SPS Measures was still not approved by the Council of Ministers.
Organisation of Standardization (ISO), the EAS are subject to regular reviews. The harmonised standards are available at the EAC Headquarter, the National Standards Institutions of Member States and those of ISO Partner States. Furthermore, the catalogue can be accessed online at the following websites: www.eac.int/trade or www.eac.quality.net.

With regard to mutual recognition, so far the marks of the Kenyan and Tanzanian Bureaus of Standardization are largely recognised across the sub-region. However, the principle of mutual recognition is not always respected as several Non-Tariff Barriers (NTBs) to trade illustrate (see section 3.1.5).

As mentioned before, COMESA decided to largely adopt the EAS and drafted a Regional Mechanism for implementing COMESA Harmonised Standards as Technical Regulations (draft). Furthermore, the EAS will feed into the standards body to be developed for the Tripartite FTA uniting COMESA, EAC and SADC. For this harmonisation process, the Tripartite Standards Committee has drafted ‘Principles and Procedures for the Development and Harmonisation of Tripartite Standards’ (for more details see: Tripartite Standards Committee, 2011).

To give an idea of the variety and multitude of technical regulations and standards already available and to be observed by value chain operators, box 3 gives an example for EAC provisions (EAS and SPS) for dairy products.

For clarification of terms used in the following box: While vertical regulations and standards are provisions applicable to specified products or product groups (such as fresh fruit and vegetables, frozen fruit and vegetables, fruit juices, wine, dairy, meat, fish, etc.), horizontal regulations and standards refer to rules across the food chain encompassing all aspects ranging from farm to fork, which are common to all foodstuffs (such as food hygiene, labelling, contaminants, etc.).

Source: Author’s own compilation based on: EAC Secretariat (2010a)

**Box 3: EAC harmonised food safety and quality protocols: Example of selected regulations and public standards for dairy products**

<table>
<thead>
<tr>
<th>SPS Basic Requirements</th>
<th>Official Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Protocol on Sanitary and Phylosanitary Measures (SPS) for the East African Community (EAC) – draft</td>
<td>• Certification and conformity assessment (3 relevant EAS)</td>
</tr>
<tr>
<td>• Specifications: UHT milk, yoghurt, dried whole milk and skimmed milk powder, raw cow milk, pasteurized milk; dairy milk ices and dairy ice creams, milk based baby food, sweetened condensed milk</td>
<td>• Food microbiology (27 EAS, incl. 12 specific for milk)</td>
</tr>
<tr>
<td>• Determination of fat and solid content, nitrogen, etc.: butter, milk powders, milk and dried milk, butter milk and butter milk powder</td>
<td>• Contaminants (5 relevant EAS, incl. 3 specific for milk)</td>
</tr>
<tr>
<td>• Inspection sampling/inspection by variables: milk and milk powder</td>
<td>• Residues (pending)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vertical standards</th>
<th>Horizontal standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Specifications: UHT milk, yoghurt, dried whole milk and skimmed milk powder, raw cow milk, pasteurized milk; dairy milk ices and dairy ice creams, milk based baby food, sweetened condensed milk</td>
<td>• Animal husbandry and breeding (pending)</td>
</tr>
<tr>
<td>• Determination of fat and solid content, nitrogen, etc.: butter, milk powders, milk and dried milk, butter milk and butter milk powder</td>
<td>• East African Organic Products Standard (1 EAS)</td>
</tr>
<tr>
<td>• Inspection sampling/inspection by variables: milk and milk powder</td>
<td>• Food technology (2 relevant EAS)</td>
</tr>
<tr>
<td></td>
<td>• Drinking Water (6 relevant EAS)</td>
</tr>
<tr>
<td></td>
<td>• Packaging and labelling (2 relevant EAS)</td>
</tr>
<tr>
<td></td>
<td>• Quality management/assurance (5 relevant EAS)</td>
</tr>
<tr>
<td></td>
<td>• Hygiene in the Food and Drink manufacturing industry - Code of Practice (EAS 39-2000)</td>
</tr>
</tbody>
</table>
In cooperation with international and regional standardisation bodies and development partners, EAC is currently developing the following standards that are relevant to this study:

- development of environmental standards/Carbon Footprint; with: Swedish Standards Institute (SIS) and Swedish international development agency (Sida)
- development of standards for staple food (see 3.2.5); with: USAID Compete
- development of standards for cassava (see 3.2.1) and potato products; with: Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA)
- development of standards for fortified food; with: East, Central and Southern Africa Health Community (ECSA-HC)

An interesting and documented example for the development process of an EAC standard is the East African Organic Products Standard (EAOPS) given in the following box.

**Box 4: Example for the development process of a harmonised EAC standard: The East African Organic Products Standard (EAOPS)**

Uganda and Tanzania had already developed private-sector national standards for organic production in a nationwide and participatory process. In Kenya, the Kenya Organic Agriculture Network had taken up standards development. The Kenya Bureau of Standards had also got engaged and produced a draft organic standard. In Tanzania the Bureau of Standards had set up a technical committee. In both Uganda and Tanzania, the Bureau of Standards participated in the initiatives of the private sector.

IFOAM and the National Organic Agriculture Movements (NOAMs) of Kenya (KOAN), Tanzania (TOAM) and Uganda (NOGAMU) agreed to propose a regional development programme for organic standards and certification cooperation: the Organic Standards in East Africa (OSEA) project. In December 2005 Sida, the Swedish international development cooperation agency, agreed to support the initiative. IFOAM has in its activities and engagement a strong focus on Africa, making it natural for IFOAM to play a coordinating role in these activities. The development of local organic certification and regional standards fits into the strategic plan of IFOAM, developed by African stakeholders during 2005. The partner organizations are also IFOAM members.

**Overall Objective:**
To improve the income and livelihood of rural communities in East Africa.

**Purpose:**
To improve the income and livelihood of rural communities in East Africa through facilitation of trade in organic products by means of a regional standard and regional certification cooperation.

**Main reasons for a regional standard (as opposed to national ones):**
- produce a harmonized standard [to] facilitate regional organic trade,
- allow for negotiations with other governments for equivalence/[mutual] recognition to facilitate exports,
- facilitate coordination of input into international standards for example CAC and IFOAM, and
- allow for better resource use [development, revision and implementation of the standard].

The standard is based on an intensive consultation process across the region and was approved and published by the EAC council in April 2007 (EAS 456:2007, EAOPS), after earlier approval in February 2007 by the Technical Committee responsible for Standards in the East African Community (EASTSC – East African Standards Sub Committee).

Sources: IFOAM (n.d., p.9ff, verbatim citation); Muwanga and Kirenga (2007, verbatim citation)
With a view to reach out to the predominantly smallholder and informal trade sectors, the Organic Standards in East Africa (OSEA) project is currently adapting the volume and language of the EAOPS to the absorption capacities of the main target groups by translating the most relevant sections of the standard into short brochures, leaflets or posters with illustrations to be used for promoting the EAOPS and for capacity building of smallholder farmers and other VC operators.

As pan-African approach, another special initiative worth mentioning is Eco Mark Africa (EMA), an initiative supported by the African Union (AU), the African RECs as well as UNEP and GIZ.

Box 5: Example for a standard currently developed under the umbrella of the African Union: Eco Mark Africa (EMA)

“Striving to be an African solution for global, regional as well as specific local challenges, the vision of the EMA as stipulated in the EMA Strategy Paper, is to create an enabling environment for better market access and enhanced trade of African products while at the same time fostering sustainable consumption and production patterns across the continent. Committed to this vision, the objective of the EMA is to encourage African producers and service providers to continually improve their performance in terms of environmental soundness, economic viability and social equity. The EMA will align the three dimensions of sustainability to specifically address the challenges which climate change poses to the African continent (EMA, 2011, p.3)”. The following sub-goals have been defined:

- Develop the EMA standard which comprises environmental, social and economic criteria for the four key sectors of the EMA, namely agriculture, forestry, fisheries and tourism.
- Provide sustainable African products with a credible and home-grown label that verifies their environmental preference and superior quality over competing conventional products.
- Leverage the potential of sustainability standards by setting up a Benchmarking, Validation and Conformity Assessment system comprising threshold criteria for other private and regulatory standards systems in the four key sectors of the EMA.
- Seek recognition by relevant political, economic and societal stakeholders as an effective and truly African instrument for promoting sustainable consumption and production patterns as well as for mitigating and adapting to climate change.

Sources: EMA, 2011, p.3 complemented by the author

3.1.3 Quality Infrastructure

Quality Infrastructure (QI) refers to all public and private sector entities and provisions related to standardisation, quality assurance, metrology and testing (SQMT), including certification and accreditation. An internationally recognised QI is a prerequisite for members of the World Trade Organization (WTO) to meet the requirements stipulated in the Agreement on Technical Barriers to Trade (TBT). According to the TBT Agreement, governmental bodies assume responsibility for conformity assessment procedures based on adequate technical competence and compliance verified through accreditation. Furthermore, “A national quality infrastructure is essential in breaking down technical barriers to trade. It is thus the key to the greater integration of the partner countries into the international trading system (BMZ, 2004, cited in Sanetra and Marbán, 2007, p.14)”.

In parallel to harmonising food safety and quality standards, COMESA and EAC have initiated the upgrading of existing QI bodies and the
establishment of new entities where gaps in the current QI systems need to be filled with a view to assuring equivalence of the regional and Member States’ Quality Infrastructure with TBT provisions (note: neither COMESA nor EAC intend to build parallel structures to the existing or emerging national QI in Member States; rather, where national QI bodies exist and are capable to take on regional tasks, both RECs will support the development of necessary additional capacities and the harmonisation of regulations and standards so as to facilitate the utilisation of existing national bodies as regional competence centres).

The following graph illustrates the core QI functions (standardisation, metrology, inspection, testing, calibration, accreditation and certification) and their embedment into the micro (value chain) and macro (policies, legislation and regulation) environments as well as the regional (RECs) and international (WTO recognised and other international standard setting bodies) protocols.
In both RECs, the development of a functioning regional Quality Infrastructure understood as a network of Member States’ QI entities coordinated and supported by the RECs’ Secretariats remains a challenge. The main reason is that public and private sector stakeholders are not yet sufficiently aware of the requirements for and benefits of an operational QI in terms of trade facilitation, market access opportunities, VC efficiency and competitiveness as well as consumer protection and public health. But, an efficient QI requires the commitment of both, the public sector for capacity development and control and the private sector for compliance. However, while the public sector is hesitant to adopt a public-private partnership approach at eye level, the private sector is hesitant about upgrading VC processes and even about advocating for market- and business-oriented approaches to harmonising regional standards and setting up an efficient and effective QI.

EAC’s approach to developing a Quality Infrastructure

EAC’s approach to developing a regional Quality Infrastructure is based on “the SQMT Act, which was enacted as EAC law in 2007 and makes provision for the harmonization of standards, the mutual acceptance of conformity assessments and quality marks, the establishment of competent testing and metrology laboratories, the coordination of accreditation activities and the implementation of technical regulations (Musinguzi et.al., 2011, p.iii)”. The SQMT Act (2006) establishes the legal protocol for a harmonised and WTO-conform Quality Infrastructure at REC-level. Aiming at implementing the SQMT Act, the EAC Secretariat initiated the project ‘Establishment of a Regional Quality Infrastructure in the East African Community (EAC)’, which is classified under Aid for Trade (AfT) category 1 (trade policy and regulation). On behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), the Physikalisch-Technische Bundesanstalt (PTB; German Metrology Institute) assists the EAC in implementing this project.

Aiming at establishing the necessary procedures and building the required institutional and human capacities, the project includes the following activities (Musinguzi et.al., 2011):

- the establishment of a legal protocol for a regional QI;
- the development and harmonisation of standards;
- the reciprocal recognition of quality assessments within the EAC;
- the establishment of internationally recognised accreditation systems; and
- the establishment of WTO-compatible national QI systems as a precondition for the conclusion of an Economic Partnership Agreement (EPA) between the EAC and the European Union (EU).

Edewa comes to the conclusion that “For effective control and management of SPS matters within the EAC, the current institutional set up needs review. As the Treaty allows the Summit to set up such institutions and departments as may deem necessary, several institutions could be established by the EAC in the long-term to address SPS and other emerging issues, and the Council should help to develop relevant policies that will guide these institutions in their operations. As a starting point, liaison offices should be introduced within the EAC Secretariat with a responsibility mainly to coordinate and control SPS matters. Such offices may include, for example: EAC SPS Liaison Office, Food Safety Desk,
Plant Protection Desk, Fisheries Desk and an Animal Health Desk (Edewa, 2011, p. 69)."

As an alternative option to establishing institutional capacities for SPS control at EAC level, Edewa (ibid., p. 59) proposes that national institutions may be mandated to execute regional mandates. In this case, EAC would focus on supporting the development of capacities of mandated institutions and on coordinating Member States’ contributions and access to relevant regional structures and services. As explained below, this is the path, COMESA started to take by assigning existing entities at Member State level as reference laboratories and Centres of Excellence.

However, given structural, operational and knowledge gaps in most national QIs of EAC’s Member States, the Secretariat’s administrative structures responsible for controlling SPS are reaching their capacity limits. While the EAC Secretariat is supposed to remain a lean organisation, resources are required for coordinating and supporting Member States’ QI as a means to promoting regional trade (Musinguzi et.al., p.4).

COMESA’s approach to developing a Quality Infrastructure
COMESA activities in the area of Quality Infrastructure are led by the Standards, Metrology and Conformity Assessment Committee. Attributing high importance to SPS issues, COMESA established an SPS Sub-Committee and advised Member States to establish National Focal SPS Points. The SPS Sub-Committee aims at assisting Member States’ stakeholders to understand their roles in harmonising regulations and standards with the REC provisions and in enforcing mandatory requirements (public sector) and in complying with regulations and standards (private sector). Furthermore, a Regional Technical Regulations Sub-Committee is in place responsible for reviewing the proposed regulatory protocol.

Understanding that the smooth development of cross-border value chains requires national commitment, coordination and harmonisation at bilateral and regional levels as well as the exchange of information and the sharing of infrastructure to be able to exploit economies of scale, COMESA has initiated the upgrading of existing laboratories to become regional reference laboratories and Centres of Excellence (for animal health in Zambia, for plant health in Mauritius and for food safety in Kenya; for more information on the Centre of Phytosanitary Excellence (COPE) in Kenya see: www.africacope.org).

For the implementation of the Green Pass certification system, COMESA will furthermore set up a Regional Accreditation Body assuming responsibility for accrediting the respective Green Pass National Authorities based on proven capacities with regard to:

- compliance of the national SPS policies and legal protocol with the Green Pass provisions;
- effectiveness of the national surveillance systems;
- effectiveness of traceability systems; and
- effectiveness of the national rapid alert and emergency preparedness systems.

Further achievements to date:

- Regional Standards and Quality Assurance Policy (finalised);
Developments at the Pan-African level and the role of the African Union (AU)

In line with the Treaty establishing the African Economic Community (Abuja 1991) Chapter XI, Article 67 Standardisation and Measurement Systems – Common Policy on Standardisation and Measurement Systems, the African Union (AU) has a major stake in efforts aiming at harmonising food safety and quality across the continent.

Aiming at promoting an enabling policy environment and mobilising political support and resources “for increased crop production and productivity to achieve food and nutrition security and increased incomes for producers” at the continent level, the Africa Union through the Commission’s Department of Rural Economy and Agriculture (AUC-DREA) provides “political guidance and leadership through its divisions of agriculture and food security and rural economy, and its technical regional offices (IAPSC [Inter-African Phytosanitary Council], SAFGRAD [Semi-Arid Food Grain Research and Development]) ... that ensure policy harmonization and integration in the continent.” (AUC-DREA, 2010, p.19) With regard to food safety and quality, AUC-DREA’s strategy 2010-2012 puts focus on the following areas:

**in crop production:**
- improving crop production through pest and disease control and management;
- enhancing SPS standards for agricultural produce;
- promoting good agricultural practices and food safety.

**in livestock and fisheries:**
- establishing effective institutional mechanisms for the collection of information on
animal health, productivity and trade for use by stakeholders;
• supporting regional animal health desks;
• developing policy protocols for the control of Transboundary Animal Diseases (TAD);
• developing policy protocols for harmonisation at continental and REC levels;
• establishing livestock health certification.

The following are relevant organisations at the level of the African Union and their respective objectives relevant to food safety and quality regulations and standards:

• African Organization for Standardization (ARSO):
  • promote sound regulatory and standards harmonisation protocols and the consistent application of harmonised standards;
• Inter-African Bureau for Animal Resources (IBAR):
  • act as OIE contact point; control and eradicate TADs; contribute to the development of standards and regulations and compliance by Member States;
• Inter-African Phytosanitary Council (IAPSC):
  • act as IPPC contact point; cooperate in all areas of plant protection and harmonise phytosanitary regulations in Africa;
• Intra-Africa Metrology System (AFRIMETS):
  • facilitate trade, consumer protection, health, safety and the protection of the environment; and
• participation of African Nations in SPS Standard Setting Organizations Programme (PAN-SPSO):
  • facilitate involvement of African countries in the OIE, IPPC, CAC and the WTO-SPS Committees.

In its effort to establishing a harmonised Pan-African Quality Infrastructure, the African Union is, among others, supported by the German Physikalisch-Technische Bundesanstalt (PTB), the United Nations Industrial Development Organization (UNIDO), the International Organization for Standardization (ISO) and the RECs (COMESA, EAC and others). Panafri
can cooperation and coordination will enable countries to benefit from a common Quality Infrastructure that would otherwise not be able to bear necessary investment and operational costs for setting up and maintaining QI services given the size of their markets and economies. Cooperation at the AU level will also facilitate to build necessary capacities and strengthen the voice of African institutions in international expert panels and standard setting organisations.

The integral approach for supporting the development of a Quality Infrastructure at the level of the African Union applied by PTB and other supporting organisations builds on a national and a regional pillar and is complemented by strategic alliances as described in the following box.
3.1.4 Private voluntary standards
Private trade and industry standards are developed by individual firms (corporate standards) or by networks (NGOs) and business associations (collective standards) with the latter usually being pre-competitive. Examples are better known from global trade (e.g. Rainforest Alliance, Fair Trade, GlobalGAP, Tesco Nature’s Choice), while examples of national and regional private voluntary standards in Sub-Saharan Africa are still extremely rare apart from:

- collective standards of national or regional associations and federations such as: the East African Business Council (EABC) with the ‘East African Community Business Guide on Sanitary and Phytosanitary Measures and Standards’; the East African Grain Council with guiding notes for maize; the Ethiopian Horticulture Producers and Exporters Association (EHPEA) with the Code of Practice for Sustainable Flower Production, the Fresh Produce Exporters Association of Kenya (FPEAK) with KenyaGAP domestic/regional scope,
- corporate standards for example of dairy or meat processors (e.g. in Kenya).

National or regional level private standard initiatives will be discussed in section 3.2 under the respective product ranges.

The East African Community Business Guide on Sanitary and Phytosanitary Measures and Standards recently drafted by the East African Business Council (EABC) serves supposedly as the only example of a generic/horizontal private voluntary standard. The objective of EABC’s SPS guide is to provide VC operators with a simplified code of practice for compliance with SPS requirements for regional (and international) trade. The document furthermore provides information on the harmonisation process at EAC level and the upgrading of the regional quality infrastructure (EABC, 2011, p.iv).
3.1.5 Regulations and standards as Non-Tariff Measures (NTM)

Despite all efforts to harmonising regulations and standards, agreeing on mutual recognition and establishing the necessary quality infrastructure, it is evident that the systems are far from being enforced for the benefit of regional trade: “Trade barriers remain endemic in the region...” (WEF, 2011, p.11). There are quite a number of Non-Tariff Measures (NTMs) in place that are acting as Non-Tariff Barriers to Trade (NTBs).

NTBs negatively impact business operations by increasing the costs of doing business and/or barring companies from markets. Competitive advantages are spoiled by high transaction costs and high waste of (perishable) products.

According to Brenton et.al. (2011, p.6), “NTBs reported by firms ... affect one-fifth of regional trade. This ignores the impacts of barriers that prohibit trade altogether, constraints that go unreported as well as costs related to inefficiencies in transport, logistics and customs which affect all goods trade. NTBs undermine the predictability of the trade regime and reduce investment in the region.”

At the same time, the benefits of a smooth functioning of regional trade are obvious. For maize simulations undertaken by Okumu and Nyankori (2010) show that the elimination of unjustified NTBs has a positive impact on inter- and intra-regional trade. With good cause, it can be expected that the abolishment of NTBs will contribute to decreasing prices of goods, opening up better marketing opportunities for producers, processors and traders as well as offering better choices for consumers.

In order to draw a line between measures that can be justified and barriers that are unjustified, the World Trade Organization (WTO) distinguishes between Non-Tariff Measures (NTM) and Non-Tariff Barriers (NTB):

- NTMs are policy measures, other than ordinary customs tariffs that can potentially have an economic effect on international trade in goods, changing quantities traded, or prices or both; some of these measures may constitute Non-Tariff Barriers. NTMs are by definition not restrictive, they can even foster trade, but may hamper trade if weakly designed or applied. NTMs comprise for example Sanitary and Phytosanitary measures; Technical Barriers to Trade; price control measures; quantity control measures; finance measures; anti-competitive measures; export related measures; trade related investment measures; distribution restrictions; restriction on post-sales services; subsidies; government procurement restrictions; intellectual property rights; and rules of origin.
- NTBs are non-tariff measures that have a protectionist intent (examples: quotas, tariff-rate quotas, licensing regimes, price bands).

Following the general categorisation of the WTO, the Draft Agreement on establishing the Tripartite Free Trade Agreement between COMESA, EAC and SADC (December 2010) defines NTBs as follows (Sandrey et al., 2011, p.192f):

- government participation in trade and restrictive practices, which are tolerated by government, including export subsidies, state trading, government monopoly and flawed procurement policies;
- customs and administrative entry procedures, which include anti-dumping duties imposed on imports, import licensing, international taxes and arbitrary customs classification;
- Technical Barriers to Trade, like restrictive regulations and standards, which are not based on international standards and inadequate or unreasonable testing and certification arrangements;
- Sanitary and Phytosanitary measures, including conformity assessment related to SPS or TBT and special formalities, which are not related to SPS or TBT;
- specific limitations, which include quantitative restrictions, exchange controls, minimum import price limits, quotas and export restraint arrangements;
- charges on imports like administrative fees, variable levies, border taxes and special supplementary duties; and
- other procedural problems for example, discrimination, costly and lengthy procedures, documentation requirements and a lack of information on procedures.

Viljoen (2011, p.4) gives examples of NTBs applied in all three RECs belonging to the tripartite FTA (see table below).

Table 3: Major NTBs applied in all RECs of the Tripartite FTA COMESA-EAC-SADC

<table>
<thead>
<tr>
<th>Type of NTB</th>
<th>Specific measures utilised</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPS and TBT measures</td>
<td>Quality inspections even of goods certified by accredited laboratories issued by bureaus of standards; different measurements of weight, labelling and quality standards; different procedures for certification and variable requirements for tolerance limits and packaging; lengthy and often duplicated procedures for seed testing, quarantine, registration and certificate of origin for cross-border trade</td>
</tr>
<tr>
<td>Customs administration and document procedures</td>
<td>Conflicting application of rules of origin and verification of goods; application of discriminatory and variable taxes and fees and limited working hours of customs officials</td>
</tr>
<tr>
<td>Varying and problematic transit and transport procedures</td>
<td>High and variable transit charges; bottlenecks in ports and border posts; non-harmonised axle-load limits; delays during vehicle inspections</td>
</tr>
<tr>
<td>Quotas or bans</td>
<td>Quantitative restrictions on imports or exports (e.g. following rising inflation for staple food in six consecutive months, Tanzania banned exports of maize in May 2011, which has a major negative impact on supplies to and prices in the Kenyan market)</td>
</tr>
</tbody>
</table>

Source: adapted from: Viljoen (2011, p.8, verbatim citation, with additions by the author)
The following table gives examples of SPS-related NTBs to trade within the EAC.

Table 4: Examples of SPS-related NTBs within the EAC

<table>
<thead>
<tr>
<th>Type of NTB</th>
<th>Affected countries</th>
<th>NTB source/stakeholders</th>
<th>Impacts on businesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ban on beef/beef products</td>
<td>Kenya</td>
<td>Uganda Departments of Veterinary Services; Ministries of Livestock Development and of Agriculture</td>
<td>Loss of potential markets</td>
</tr>
<tr>
<td>Certification of milk</td>
<td>Kenya</td>
<td>Uganda Dairy Board</td>
<td>Loss of potential market valued at US$ 1 million for one Kenyan processor</td>
</tr>
<tr>
<td>Retesting milk/milk products</td>
<td>Uganda, Tanzania</td>
<td>Kenya Ministry of Livestock Development; Kenya Dairy Board; Kenya Bureau of Standards</td>
<td>Denial of market entry; loss of potential markets</td>
</tr>
<tr>
<td>Ban on day-old chicks</td>
<td>Uganda</td>
<td>Kenya Ministries of Livestock Development and Agriculture</td>
<td>Loss of potential market</td>
</tr>
<tr>
<td>Testing procedures for food imports and exports</td>
<td>Kenya</td>
<td>Tanzania Food and Drug Authority</td>
<td>Cost and time incurred in testing and certification procedures</td>
</tr>
<tr>
<td>Plant import permit charges on tea destined for auction</td>
<td>Uganda</td>
<td>Kenya Plant Health Inspectorate Services</td>
<td>Costs bearing on competitiveness of Ugandan tea sold via Kenyan auction</td>
</tr>
<tr>
<td>Non recognition of SPS certificates for tea</td>
<td>Uganda</td>
<td>Kenya Ministry of Agriculture</td>
<td>Delayed access to Kenya tea auction; additional costs</td>
</tr>
</tbody>
</table>

Source: adapted from: Edewa (2011, p.31)
Regulations and Standards for Selected Value Chains in EAC and COMESA

The lack of progress in removing NTBs in the EAC brought the Council of Ministers in 2008 to direct the Secretariat to prepare a time-bound programme for the elimination of NTBs. Following adoption of this programme by the Council, the National Monitoring Committees on NTBs in Partner States were advised to submit quarterly reports on the elimination of NTBs according to the Time-bound Programme. While some issues have been resolved meanwhile, new NTBs have been registered (for a list of resolved, disputed and new NTBs see: EAC Secretariat, 2010b).

Despite the establishment of National NTB Monitoring Committees, there is still limited commitment at Member States’ level to comply with their respective responsibilities for the removal of unjustified NTBs, not only in conformance with their EAC obligations but also in conformance with the WTO SPS and TBT Agreements. Nevertheless, the establishment of the Time-bound Programme for the elimination of NTBs is an initial step towards building the necessary dispute settlement system.

Just like EAC, COMESA is establishing a monitoring and reporting system for NTBs (not yet operational). Recording and reporting shall be organised as a database that can be accessed online and through a Trade Information Desk (TID). NTBs will be reported to the COMESA

Box 7: Two NTBs within the EAC: Kenya-Uganda Standoff in Livestock Trade and Kenya versus Uganda and Tanzania Dairy War

Kenya-Uganda Standoff in Livestock Trade

In 2008, there was a standoff between Kenya and Uganda on chicks, beef and bull semen trade. Kenya maintained that Ugandan firms were to be allowed to export day-old chicks and chicken products to Kenya only on condition that they were sold through agents in the latter country, who would conduct risk assessment on the imports. Uganda on the other hand maintained that their Kenyan counterparts must first submit a risk assessment report before an 11 year old ban on importation of beef, bull semen, and other associated products from Kenya can be lifted. The positions taken by both countries, contradicted an earlier stand taken by both counties on the sidelines of a World Organization for Animal Health general session, where they agreed in principle to lift the ban unconditionally. The industry players in both countries blamed each other for politicizing the issue against the spirit of EAC trade integration.

The stalemate affected the livestock industry in both countries, especially their leading firms, Ugachick in Uganda and Kenchick in Kenya. It is estimated that Ugachick was losing up to USD 200,000 per month as a result of the stalemate. The above stalemate could have been averted if both countries adopted harmonized standards on trading of livestock and livestock products, vaccination, and traceability so that neither side perceives being disadvantaged due the arbitrary nature of national decisions.

The Dairy war: Kenya versus Uganda and Tanzania

Milk processed by Musoma Dairy Limited, Tanzania was denied entry into Kenya in mid-2008 by the Kenya Revenue Authority. The Kenyan authorities required milk exporters from Tanzania and Uganda to have certificates proving that these products had been processed under constant supervision by veterinary authorities in the region. Tanzania and Uganda argued that the restrictions and multiplicity of controls were contrary to what the EAC Member States had agreed on milk exports. Secondly, it was argued that the veterinary standards imposed by the Kenyan authorities were neither made public nor was the information shared with veterinary authorities in the region. The main trade barrier restricting milk trade in this case were the national legislations and the outdated/cumbersome import authorization systems that in effect were not really intended for enforcing technical standards or sanitary and food safety standards.

Source: EABC (2011, p.4 and p.7, verbatim citation)
Trade and Customs Committee, which has the authority to advise Member State governments to take action.

As an answer to the special challenge of removing NTBs for the predominantly informal cross-border trade in food products COMESA developed and pilot-tested a Simplified Trade Regime (STR) in cooperation with EAC, which is explained in the following box. Removing trade barriers for informal trade will have a major positive impact on market access for smallholder farmers.

Box 8: COMESA Simplified Trade Regime (STR)

In a bid to better integrating the informal trade, which realises the bulk of cross-border food trade, COMESA developed a Simplified Trade Regime (STR). To this end, COMESA assisted the formation of Regional Cross Border Traders Associations (CBTAs), first in Zambia (1997) and later in Malawi and Zimbabwe. With growing lobbying capacity, the CBTAs demanded fairer treatment in cross-border trade and “COMESA was charged with implementing simplified trade formalities for small traders allowing them to enjoy duty free access with simplified documents. This is what is now known as the Simplified Trade Regime.” For products listed in the common list of products qualifying for the STR, small traders can apply the COMESA Simplified Certificate of Origin (SCOO) and the COMESA Simplified Customs Document (CSCD; for the common list and for explanations on the STR see: COMESA, 2010b).

Source: COMESA (2010a, p.5)

Under the Tripartite system, COMESA, EAC and SADC agreed to coordinate their NTB reporting systems.

3.1.6 The situation within EAC and COMESA Member States

It can hardly astonish that the Member States’ Quality Infrastructure with related policies, legal provisions, mandatory regulations and voluntary standards as well as institutional capacities and overall system performance are quite heterogeneous, both in EAC and COMESA. In addition, there are also important differences in production, value addition and trade performance on the part of the private sector and on the part of the public sector where state-owned corporations are involved in economic activities. This accompanied by varying levels of commitment for harmonisation challenges the economic integration process. The situation may be explained by the fact that “National industrial development priorities are at times in conflict with EAC integration principles. Despite the existence of regional legislation, member countries often delay or even reject the implementation of the SQMT Act at the national level, while the EAC Secretariat lacks a mechanism for sanctions. Integration is therefore a difficult and slow and sometimes even frustrating process for the EAC Secretariat. This is not a question of lack of political will towards EAC integration, but rather a matter of short-term priorities (also lobbied for by the national industrial sector) versus medium- and longer-term goals (Musinguzi et.al., 2011, p.3f)”.

Furthermore, the QI at national level is in many countries characterised by:

• significant overlap of mandates both at the level of different line ministries and at the lev-
el of their respective subordinate parastatal organisations; and
• outdated policies, laws, mandatory regulations and voluntary standards that are not in line with regional and multilateral obligations and international best practice.

Also, the institutional set up for SPS differs from Member State to Member State. In Rwanda for example, responsibility for SPS measures forms part of the national trade policy, in Kenya the trade policy does not sufficiently address SPS matters and while the trade policy in Tanzania recognises the need for complying with the SPS Agreement, the country lacks an implementation strategy. These few examples highlight the role of EAC and COMESA in assisting Member States to draft national policies and implementation strategies for the effective implementation of regulations and standards in general and of SPS Measures in particular as a means to promoting regional trade.

Musinguzi et.al. (2011, p.4) shadow further light on the challenging task of harmonising regulations and standards across EAC Member States, which are supposedly very similar for COMESA: “The EAC Member States are in the process of concluding an EPA [European Partnership Agreement] with the EU, which would in fact accelerate QI harmonization. There are, however, significant challenges in this regard. Contrary to WTO rules, some EAC member countries have established a large number of compulsory standards and the respective Standards Bureaus derive substantial income from the administration of such standards. Hence, the interest in reducing the number of national compulsory standards and implementing harmonized standards is rather low. ... Finally, changing well-entrenched national QI systems towards a harmonized, WTO compatible regional QI system sometimes takes longer than had been anticipated when planning the project.”

### 3.2 Opportunities and challenges for assuring food safety and quality in selected value chains

Assuring food safety and quality starts at the farm (including the procurement of safe inputs) and ends on the consumer’s table. The objective is to supply consumers with safe and high quality food while realising benefits for all operators along the VC. And, if compliance costs can be managed, more affordable consumer prices may emerge as side-effect, since managing food safety and quality efficiently and effectively bears the potential of increasing productivity, reducing production and transaction costs as well as reducing post-harvest losses and rejection rates.

Given that the aspired objectives cannot be achieved through end product control alone, all operators along the VC have to take responsibility for assuring food safety and quality through the adoption of process standards such as Good Agricultural Practices, Good Manufacturing Practices, Good Distribution (Trading) Practices and Good Hygiene Practices. In a bid to furthermore assure sustainability of VC activities, additional sustainability regulations and standards addressing social and environmental aspects play an ever-more important role, especially for exports to developed countries (certain products and markets).

However, VC operators are not the only ones having a stake in assuring food safety and quality, it rather needs an integrated approach
involving appropriate laws, regulations, standards and market surveillance systems as well as an enabling environment and competent public and private services as part of an efficient and effective system for safety and quality assurance. The parallelism to public and private sector roles and functions in Quality Infrastructure are obvious even if portrayed in a different way (see graph 3 in section 3.1.4).

Apparently such sophisticated systems are not in place for many value chains in developing countries in general (apart from high-value export-oriented value chains). The following illustration provides an idea of the integrated systems that need to be developed for assuring food safety and quality along value chains for promoting competitiveness in domestic, regional and international markets and facilitating cross-border trade.

Even if there are not many examples available yet, East African Standards currently in the process of development or revision start to reflect the need to apply an integrated value chain/Quality Infrastructure approach as illustrated above.

As an example, the Kenyan coffee standard, which is currently under revision, is supposed to serve as a benchmark for various (international and perhaps national) certification schemes from which VC operators may chose. The adaptation and updating of the former
product standard is guided by changes in the organisation of domestic and international production and trade (e.g. liberalisation and traceability requirements), new opportunities in niche markets and in outlets that currently turn from niche into mainstream markets (product differentiation through sustainability certification) as well as by the urgent need to assure food safety. It also illustrates that the scope of standards shifts from end-product control to promoting compliance with and enforcement of process standards (World Bank, 2008).

These considerations will guide the following assessment of the systems currently in place in selected value chains in section 3.2.1 to 3.2.5, the analysis of strengths, weaknesses, opportunities and threats (SWOT) in section 4.1 and the recommendations in sections 4.2 and 4.3.

As explained before, the EAC is already quite advanced in developing regional standards/harmonising national regulations and standards and that COMESA intends to largely adopt the East African Standards (EAS). Accordingly, the following assessment of the standard systems and Quality Infrastructure for selected VCs mainly refers to the stage of harmonisation in the East African Community. Furthermore, examples referring to the national level mainly refer to Kenya and Ethiopia, the two countries the author had a chance to visit during the field phase (the visits to Zambia and Tanzania were directed to call in at COMESA and EAC, not to assess the countries’ situation with regard to food safety and quality assurance systems).

3.2.1 Cassava
Brief introduction to value chain features and performance
Cassava is the second most important staple crop in Africa after maize. It has been identified by CAADP as having a potential to reduce hunger through increased food supply and improved response to emergency food crises. Furthermore, cassava has a potential to contribute to economic growth, especially with the following potential uses in local and regional markets: high quality cassava and composite flour (for blending maize and wheat flour), improved and more convenience-type traditional value-added products, starch and sugar syrup, supplement to livestock feed and bio-ethanol. Furthermore, cassava leaves have a nutritive value and can be used both in human food and animal feed.

According to a value chain analysis for cassava flour and related products implemented in Kenya and Uganda in 2007, “there is an enormous demand potential with major private sector players highlighting keenness to include cassava chips in the processing of animal feeds ... [with] industrial processing opportunities in the baking sector for cassava flour as energy ingredient” (Kimathi et.al. 2007, p. 7). However, for seizing these existing market opportunities and, by doing so, contributing to the reduction of hunger and poverty, prevailing subsistence-oriented cassava farming has to transform into (still smallholder but) market-oriented commercial production systems.

As a traditional and perceived 'poor man’s' crop, cassava has been neglected for a long time. In so far it is not astonishing that the most critical factors that hinder the emergence of a better performing cassava value chain are the
lack of key institutions and protocols necessary for making processes more efficient at every stage of the value chain and improving market linkages for a better access to domestic and regional markets.

The following challenges in the cassava value chain system have to guide the development of regulations and standards, the design of an appropriate Quality Infrastructure and the approach to building capacities for VC operators' compliance and public sector market surveillance. The main challenges can be summarised as follows:

- insufficient access to improved varieties resistant to endemic and emerging pests and diseases;
- high incidence of pests and diseases (especially cassava mosaic virus) due to the continued use of infected and infested planting material;
- predominantly subsistence-oriented production with low volumes of marketable surplus production;
- weak market linkages, predominantly through informal trade;
- non-existent food safety and quality assurance systems along VCs;
- high wastage due to the perishability of raw cassava and poor post-harvest handling;
- poor raw material quality for processing;
- low spread of information on diversified value-addition opportunities and on required raw material quality;
- inappropriate technologies for value-addition and insufficient access to processing technologies;
- lack of clear guidelines and of adequate food safety and quality regulations and standards necessary for enhancing value addition (EAS have recently been developed but are not yet implemented).

Current status of regulatory and standard protocols and regional harmonisation
The current status of the development of regulations and standards and the harmonisation of the provisions for cassava within EAC and COMESA is summarised in the following box, which also gives a list of main stakeholders involved in the development, dissemination and implementation of standards and regulations.
Opportunities for supporting the harmonisation and implementation of regulations and standards
Guided by the challenges along the cassava value chain and the current status of harmonisation mentioned above, the following main areas for intervention have been identified as opportunities for upgrading regulatory and standards frameworks for cassava at regional and Member States’ levels:

- strengthen public sector capacities for enforcement (by streamlining mandates, upgrading legislation, adapting and adopting harmonised standards at national level, developing capacities within the QI);
- develop capacities of public and private service providers with regard to upgrading advisory services offered to VC operators for the development of quality assurance systems; and
- build private sector (input providers, farmers, traders, processors as well as business operators offering transport and logistics services) capacities in food safety/quality assurance along the value chain.

Box 9: Current status of regulatory and standard protocols and regional harmonisation for Cassava

**Regional standards:**
- The initiative to develop (regional) cassava standards was taken by the Uganda National Bureau of Standards (UNBS) in 2006 recognising the market potential on the one side and the food safety/quality constraints on the other side.
- The following Draft East African Standards (DEAS) for cassava are due for adoption (see: EAC Quality, 2011):
  - DEAS 738-2010, Fresh sweet cassava – Specification
  - DEAS 739-2010, Dried cassava chips – Specification
  - DEAS 740-2010, Cassava flour – Specification
  - DEAS 741-2010, Cassava composite wheat flour – Specification
  - DEAS 742-2010, Food grade cassava – Specification
  - DEAS 743-2010, Cassava crisps – Specification
  - DEAS 744-2010, Cassava and cassava products – Determination of cyanogens
- Standards for seeds and aflatoxin: see section 3.2.5 (maize).
- COMESA and EAC draft SPS protocols: due for approval by the respective Council of Ministers (status May 2011).

**National regulations/standards:**
In parallel to the consultation process for regional cassava standards at EAC level, Kenya, Tanzania and Uganda gazetted the standards in August 2010.

**Private voluntary standards/branding:**
No initiatives known.
- Regional level: EACS, East African Standards Technical Sub-Committee
- National level: Burundi Bureau of Standards (BBN), Kenya Bureau of Standards (KEBS), Rwanda Bureau of Standards (RBS), Tanzania Bureau of Standards (TBS) and Uganda National Bureau of Standards (UNBS)
- Supporters: Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), International Institute for Tropical Agriculture (IITA), USAID Compete/Kenya
- Further stakeholders: National Feed Millers Associations (e.g. Association of Kenya Feed Manufacturers/ AKEFEMA); see also List of Participants in: EAC Secretariat (2010c)

Source: ???
Proposed way forward for upgrading regulatory and standard protocols and regional harmonisation

The results from interviews with key experts and desk research suggest that strategies for upgrading the regulatory and standards frameworks for cassava at the level of EAC and COMESA and their respective Member States should be guided by the following recommendations:

**Standard development and harmonisation at REC level:**
- adopt/implement/enforce the SPS Protocols to facilitate cross-border trade (incl. Mutual Recognition Agreements);
- develop/update further regional standards such as for carotenoid-rich yellow and orange cassava and others;
- assure a coherent approach involving relevant sector ministries in Member States (Agriculture, Trade, Industry, Health, Education, etc.); and
- continue/strengthen private sector participation in standard development at regional level (e.g. East African Business Council (EABC), East African Farmers Federation (EAFF)).

**Public-private dialogue in Member States:**
- create awareness and achieve commitment for private sector participation in standard development and commitment for compliance;
- raise awareness on potential of cassava for food security and income generation and promote diversification of processed products; and
- take up regulation and standard issues in policy papers and sector strategies (e.g. (draft) Zambia Cassava Sector Development Strategy, (draft) Kenya Root Crop Development Policy).

**Implementation in Member States:**
- create awareness on the benefits of cassava production and consumption (change the image of a ‘poor man’s food’);
- realise campaigns for broad-based awareness creation on regional standards among enforcement bodies and VC operators;
- upgrade the equipment of public sector bodies responsible for conformity assessment, certification and testing;
- upgrade skills of staff responsible for conformity assessment (e.g. entomologists, physiologists, auditors);
- facilitate access to public or private decentralised (close to the field), low-cost accredited QI services (e.g. for testing of aflatoxin, E.coli and other food hazards);
- train economists to assist VC operators in cost-benefit analysis of compliance with regulations and standards;
- facilitate access to quality (disease and virus-free) planting material, appropriate technologies and equipment for processing;
- upgrade and up-scale capacities of public and private extension services and VC operators in food safety and quality assurance from farm to fork (e.g. GAP, Good Post-harvest Practices, GMP); and
- facilitate the emergence and strengthen the capacities of Farmer Based Organisations (FBO) for peer learning and achievement of economies of scale to reduce compliance costs.

The proposed way forward is quite broad reflecting the urgent necessity to not only address upgrading needs strictly focussing on the development, revision and regional harmonisation of standards/regulations and strengthening the capacities of the national and regional Quality
entered the coffee market and Brazil doubled its production between 1993 and 2003 (Bacon 2004). As a consequence, world market coffee prices crashed alarmingly at the beginning of the new millennium. This diminished the opportunities of smaller coffee producing countries, particularly in Central America and Africa... (Petit 2007). Around the same time, other major changes occurred at the end of the value chain, at the consumer’s side. Coffee drinkers in the major consumer countries became increasingly sensible and aware ... about the circumstances under which coffee is produced, processed and marketed (Stellmacher et.al., n.d., p.1f).

As a consequence, certification has gained importance in the past ten to fifteen years with a view to differentiating the market and addressing consumer concerns in industrialised countries. Over time, certification schemes have become ever-more comprehensive challenging producers, processors and exporters in developing countries to adopt internationally benchmarked good environmental and social practices together with food safety and quality assurance systems along the entire value chain. Catchwords in this context are: eco-labelling, improved working conditions, worker health and wage levels, freedom of association, the prohibition of child labour and the payment of fair prices aimed at empowering producers and developing the communities, in which they live.

Even if compliance is challenging and certification expensive for resource-poor farmers, producers can benefit from improved market access, increased productivity, reduced unit production costs (mainly due to reduced plant protection costs) and, in some instances, from price premium paid. Whether the benefits out-
weigh additional initial and recurrent costs of compliance and certification depends on the prevailing production and market access conditions as well as on the prices paid in the domestic, regional and international markets.

Certification and verification for coffee in Eastern Africa is dominated by the following international schemes (DCDM, 2010, p.11): Utz Certified is broadly used in Kenya, Tanzania, Uganda, and Ethiopia; Organic in Kenya, Tanzania, Rwanda, and Ethiopia; Fair Trade in Kenya, Tanzania, Rwanda, and Ethiopia; 4C (Common Code for the Coffee Community) in Kenya, Tanzania, and Uganda; Rainforest Alliance certification in Kenya, and Ethiopia; and Starbucks C.A.F.E Practices approval in Ethiopia.

However, despite the rise in private certification schemes for coffee, the non-certified mainstream market still represents 90% of the global trade in coffee (Salazar, 2011) and even 75% in Ethiopia where the price on the domestic market is higher than for export coffee (Sutton and Kellow, 2010, p.38). Consequently, national and regional public regulations and standards and/or private voluntary standards are required for upgrading food safety and quality in the mainstream market and thus improve competitiveness in the domestic, regional and global market, assure consumer protection and enable VC operators to reap further related benefits.

Across Eastern Africa, the following challenges have a major bearing on the performance and competitiveness of the coffee value chain: shortage of improved cultivars; poor production practices and resulting low yields; inadequate post-harvest practices and storage facilities; weak value chain linkages principally through cooperative systems; poor quality of coffee bags; inadequate handling (washing and 1st stage drying) contributing to adulteration along the VC; and largely outdated regulations and standards.
Box 10: Current status of regulatory and standard protocols and regional harmonisation for Coffee

Regional standards:
- Harmonisation at REC-level is limited.
- The following EAS are available (EAC, 2010a):
  - EAS 221:2001, Woven bags (100 percent sisal) for clean coffee beans – Specification
  - EAS 105:1999, Roasted coffee beans and roasted ground coffee – Specification
  - EAS 130:1999, Green coffee beans – Specification

National regulations/standards:
- The example of the Kenya Bureau of Standards (KEBS) standards body for coffee indicates a certain backlog in the harmonisation of standards at regional level: compared to the 6 EAS, KEBS has developed 33 vertical standards covering among others the following areas: glossary of terms in international trade, green coffee, roasted coffee beans, instant coffee, etc.; revised draft standards incl. a Certification Standard and an Industry Code of Practice are awaiting approval.
- The Ethiopian Fine Coffee is a government-owned trademark used as brand for Ethiopian coffee (see box below).

Private voluntary standards/branding:
- Standardisation and certification in the global coffee market are driven by international third party standards (Utz Certified, Rainforest Alliance, Fair Trade, 4C, organic) and corporate standards (e.g. Starbucks, Nestlé).
- Though being voluntary by definition private standards are quasi-mandatory for accessing international markets, not only in the US, Japan and Europe but as well starting for up-market segments in China and India.
- The first certification for ISO 22000 Food Safety Management Systems for coffee in Kenya has recently been awarded to Dormans, a local processor selling both in the domestic and global market.
- The Eastern African Fine Coffees Association (EAFCA) aims at harmonising third party certification through mutual recognition, accreditation of master trainers, reduction of certification costs and producer incentives for certification.
- A Public Private Partnership (PPP) of Sangana Commodities Ltd., GIZ and others: Development of a proposed additional module to the 4C Code of Conduct taking into account climate change issues.

Product-specific Quality Infrastructure:
- Coffee laboratories have been established in Ethiopia (not yet operational), Kenya and Rwanda.
- Capacities to respond to future stricter pesticide MRLs of the EU are limited.

Stakeholders involved in standards development and harmonisation (selection, not representative):
- Regional: Eastern African Fine Coffees Association (EAFCA; regional non profit member association representing coffee sectors in Burundi, Ethiopia, Kenya, Malawi, Rwanda, South Africa, Tanzania, Uganda, Zambia, Zimbabwe)
- Supporters: Common Fund for Commodities (CFC; coffee quality improvement), Coffee Management Services (US quality management institute providing training in certification and verification; see: EAFCA and CFC, 2011), East Africa Coffee Research Network (CORNET), ASARECA (coffee quality improvement), GIZ Programme Social and Environmental Standards
Opportunities for supporting the harmonisation and implementation of regulations and standards

The following intervention areas are central for upgrading regulatory and standards frameworks for coffee at regional and Member States’ levels:

• seize opportunities from existing good practices in public-private partnership approaches for adopting international standards;
• strengthen public sector capacities for enforcement (by streamlining mandates, upgrading legislation, adapting and adopting harmonised standards at national level, developing capacities within the QI);
• develop capacities of public and private service providers with regard to upgrading advisory services offered to VC operators for the development of quality assurance systems; and
• build private sector (input providers, farmers, traders, processors as well as business operators offering transport and logistics services) capacities in food safety/quality assurance along the value chain.

Proposed way forward for upgrading regulatory and standard protocols and regional harmonisation

Strategies for upgrading the regulatory and standards frameworks for coffee at the level of EAC and COMESA and their respective Member States should be guided by the following recommendations:

Standard development and harmonisation at REC level:
• revise the packaging standard for coffee to reflect (i) effects of price rises of sisal (raw material for coffee bags), (ii) specific needs for food safety and (iii) specific requirements of organic certification.

Implementation in Member States:
• facilitate paradigm shift from end product control to process-oriented quality assurance systems;
• facilitate access to accredited laboratory and certification services affordable for smallholder farmers (e.g. develop systems for decentralised access to low cost testing for e.g. ochratoxin and pesticide residues);
• build/strengthen organisational and management capacities of outgrower and cooperative systems;
• build capacities of smallholder farmers to better understand and manage quality (pesticide use, post-harvest handling);
• establish monitoring systems for MRLs and mycotoxins;
• develop feedback systems for buyers and cooperatives to report grading results and rejection reasons back to farmers;
• improve downstream post-harvest and storage practices (warehouse sanitation) especially with regard to avoiding mycotoxin infestation;
• develop/revise provisions for warehouse sanitation and inspection to reflect needs for hygiene management during storage (mentioned for Kenya, supposedly also necessary in other countries);
• upgrade and up-scale capacities of (public/private) extension services and VC operators in food safety and quality assurance from farm to fork (e.g. GAP, Good Post-harvest Practices, GMP); and
• further develop capacities for up-scaling branding and certification (support aware-
ness creation, cost-benefit analysis, knowledge transfer and accessibility for small-scale farmers).

For up-scaling branding, the Ethiopian Fine Coffee initiative may serve as an example for a government-driven approach and successful advocacy at international level (see box below).

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### Box 11: Ethiopian Fine Coffee – a government initiative for establishing a trademark

Some of the world’s finest coffees, such as Harrar®, Sidamo® and Yirgacheffee®, originate in Ethiopia. These coffees have a unique flavor and aroma that distinguish them from coffees of other countries... which command a very high retail price in the international market. However, only 5 to 10 percent of the retail price actually goes back to Ethiopia; most of the profit is shared by distributors and middlemen in the marketing sector. ...

Seeking to narrow down this gap between the retail price and the return to the producers, the Ethiopian government is trying to use a range of intellectual property rights (IPRs) to differentiate their coffee in the market place and achieve higher returns. In 2004, the government launched the Ethiopian Coffee Trademarking and Licensing Initiative... The Initiative is organized and run by the Ethiopian Fine Coffee Stakeholder Committee... – a consortium comprising cooperatives, private exporters and the Ethiopian Intellectual Property Office (EIPO) as well as other concerned government bodies.

Used to indicate the regional origin of a particular product, a GI [Geographical Indication] registration must demonstrate a link between a characteristic of the product and the region where it is produced. If each Ethiopian specialty coffee were registered as a GI it would have to be produced in a specific area of the country under specific circumstances. For example, a GI for Sidamo coffee would require every bag of Sidamo to be produced, processed or prepared in the Sidamo region and have a special quality that is directly dependent on the unique properties of the region. A GI also requires that the government oversee producers and distributors to guarantee that the coffees sold belong to a particular style or region, such as Sidamo.

However, this is not a practical solution for Ethiopia. Specialty coffee in Ethiopia is grown on over four million small plots of land by an estimated 600,000 independent farmers spread throughout the country in remote areas. Although Ethiopian coffees such as Sidamo and Harrar are named after specific regions, all of it is not produced in the same region under the same circumstances. Distribution is also a problem, as it is predominately done informally by hauling bags of coffee on foot for many kilometers. Government oversight of coffee producers is therefore nearly impossible. Farmers would be required to pay a surcharge for government oversight, and this would only be an additional burden on them, many of who are already living below the subsistence level. Therefore the very nature of coffee production in Ethiopia makes GI certification difficult and impractical.

The government of Ethiopia decided that instead of trying to protect Ethiopian coffee’s geographical origin, it would be better to protect its commercial origin, which it would do through registering trademarks. This was seen as a more direct route of protection because it would grant the government of Ethiopia the legal right to exploit, license and use the trademarked names in relation to coffee goods to the exclusion of all other traders. ... Using trademark registrations, the government of Ethiopia could then produce greater quantities of specialty coffees from all over the country. ... The Stakeholder Committee therefore opted for a trademark-based solution, with the Ethiopian government as the owner of these marks. This strategy gave the Ethiopian government greater and more effective control over the distribution of its product, which ultimately increases revenue by exporting more goods, enabling a rise in prices and benefits to farmers.

--> continued on the next page

Source: WIPO (2010, verbatim citation)
Box 11: Ethiopian Fine Coffee – a government initiative for establishing a trademark - continued

The trademark strategy for Ethiopian coffee faced a major difficulty in 2006. The United States Patent and Trademark Office (USPTO) had approved the application to register Yirgacheffee®. But the National Coffee Association ..., representing coffee roasters of the United States, objected to the EIPO’s applications to trademark first Harrar, then Sidamo. The grounds for opposition in both cases were that the names had become too generic a description of coffee, and as such were not eligible for registration under United States trademark law. ... The American coffee chain Starbucks Coffee Corporation, ... was widely reported in the media to have been a driving force behind the ... objection ...

The EIPO filed rebuttals against the USPTO decisions with supporting evidence to demonstrate that the terms Harrar and Sidamo had acquired distinctiveness. Meanwhile, both Starbucks and the Ethiopian government were keen to resolve their differences quickly ... Their joint efforts led to an announcement in 2006 that they had reached a mutually satisfactory agreement regarding the distribution, marketing and licensing of Ethiopia’s specialty coffee designations ... Starbucks agreed to sign voluntary trademark licensing agreements which immediately acknowledge Ethiopia’s ownership of the Harrar, Sidamo and Yirgacheffe names, regardless of whether or not a trademark registration has been granted. In August 2006, the USPTO informed the EIPO that their rebuttal in the case of Harar had been successful. A trademark for Sidamo was also granted in February 2008.

Source: WIPO (2010, verbatim citation)

The Ethiopian national coffee branding initiative is certainly a very interesting example, which other countries already start to follow for coffee and other commodities. However, the Ethiopian coffee case is in so far special as the brand names were already known to leading customers in the world and the taste of Ethiopian coffee is since long appreciated by consumers.

3.2.3 Dairy (milk and milk products)
Brief introduction to value chain features and performance
The dairy sector plays a significant role in agricultural and rural economic development in Eastern and Southern Africa, including aspects of pro-poor growth, food security and access to balanced nutrition; it also represents a significant source of employment. On the production side, smallholders contribute between 70% and more than 90% to overall raw milk production; on the consumption side, 80% to 90% of raw milk is consumed at the point of production (food and/or feed for rearing calves); and on the trade side, 80% to 90% of traded raw milk are commercialised through informal channels. Due to predominantly rain-fed smallholder production and a chronic under-supply with feed crops, the dairy sector is characterised by highly volatile raw milk supplies fluctuating both between dry and rainy seasons and from one year to the other, accompanied by severe quality problems.

In both, EAC and COMESA, milk surplus and deficit regions are found within countries and in cross-border areas. This is supposedly the reason why domestic and intra-regional trade have grown in the past few years, despite the perishability of raw milk and dairy products. However, fragmented value chains impede the otherwise for farmers, traders and processors potentially remunerative and for consumers necessary balancing between surplus and deficit markets. Nevertheless, there is strong private sector interest mainly of larger processors to expand trade in dairy products, provided quality raw material in sufficient quantities and quality can be sourced throughout the year.

The domestic and regional trade is characterised by the following inefficiencies and challenges, which also contribute to the underutili-
regulation of processing capacities in the sub-region (summary of challenges mentioned by: Jensen et al., 2010; Lore and Omore, 2010 and by interview partners):

- high milk losses at the farm level: 8.4, 28.6, 46.4 and 54.2 million litres of milk per year for Uganda, Ethiopia, Tanzania and Kenya respectively; total value of post-harvest milk losses per year accounting for: 9.9, 14.2, 17.8 and 23.9 million US dollars for Tanzania, Ethiopia, Kenya and Uganda respectively;
- high subsistence orientation of raw milk production with only a low share of 10 to 20% being sold through formal channels and less than one percent exported;
- inefficient collection and distribution systems through small-scale informal dairy trade;
- inadequate transport and logistics infrastructure (cold chain) for trading highly perishable raw milk through predominant informal trade channels accounting for more than 80% of raw milk traded;
- low degree of raw milk processed into less perishable and more easily tradable dairy products (milk powder, Ultra-High Temperature (UHT) milk, cheese and yoghurt);
- inadequate technical regulatory and standards frameworks, not to speak about implementation systems, for SPS measures both at national and EAC and COMESA (harmonised) levels;
- non-existent systems for mutual recognition of standards for cross-border trade;
- nonexistent infrastructure and accredited capacities for affordable testing of raw milk quality close to the field and near to the informal trade;
- unjustified Non-Tariff Measures as exemplified by the ‘Dairy war’ between Kenya on the one side and Uganda and Tanzania on the other side (see box 7); and
- inappropriate dairy development policies and projects guided by the idea to develop modern VCs by marginalising informal traders without recognising the crucial role of small-scale milk traders for milk collection and distribution.

In the context of consumer protection and public health it has long been argued that more processed milk needs to be offered to consumers, since significant latent health hazards are associated with the consumption of raw milk. Main hazards are linked to (intended) adulteration by (unintentionally) using contaminated water; bacterial counts (e.g. coliform); (bacterial) zoonoses (e.g. brucellosis, bovine tuberculosis); or antimicrobial residues from veterinary drugs.

There is hence an obvious need to addressing these shortcomings by designing technical standards, implementing SPS Measures and building VC operators’ capacities for compliance in a bid to protect consumers’ health, to improve post-milking handling, to reduce waste along the value chain and to assure consistent supplies of raw milk with appropriate quality characteristics, in sufficient volumes and on a regular basis to the processing industry.

In a bid to addressing health hazards, the EAC recently developed new dairy standards based on Codex Alimentarius provisions, however without adapting the international standard to the regional reality: while the Codex standard is appropriate for countries, in which milk is consumed in processed form only, the large majority of consumers in Eastern Africa consume raw
milk after boiling, which reduces the health risk otherwise arising from bacterial pathogens.

The newly designed EAC standards for dairy products (for raw milk, pasteurised milk, UHT milk, powdered milk, sweetened and condensed milk, butter, yoghurt, dairy ice and ice cream) hence stipulate food safety and quality criteria that are neither oriented to the habits of East African consumers nor to the current limited compliance capacities of the predominantly small-scale oriented dairy sector or the shortcomings in the transport and logistics infrastructure. Under these circumstances it is not astonishing that the EAC standards have not yet been implemented even if they have already been adopted by some Member States and although they are supposed to be taken on by COMESA.

It may be added that a similar approach was applied in Kenya to developing standards for camel milk. Guided by the interest to promote niche market exports, the standards of the European Union for milk products served as benchmarks. With intensive support by buyers (e.g. through embedded service and collection systems), capacities of producers can be built to meet these high standards. However, it is obvious that for many years to come, European standards are inappropriate for the mainstream pastoralist and informal trading system.

Despite the challenging situation in the Eastern African dairy market, growth prospects for domestic and cross-border trade are promising. Given an annual per capita consumption of milk and dairy products below 50 litres compared to 200 litres recommended by the World Health Organization, there is room for growth in consumption and hence in production. Consequently, strategic sector development and harmonisation of regulations and standards bear an important potential for food security and pro-poor growth, provided EAC and COMESA adapt the standards to the Eastern and Southern African value chain realities.

Given the importance of the informal dairy sector, the following good practices for integrating smallholder farmers and informal small-scale traders into an approach for upgrading dairy quality assurance systems along the VC are worth mentioning:

- Recognising the role of small traders for low-cost collection of raw milk from smallholder farmers and distribution to the rural and urban poor, projects have been designed especially in Kenya but also in Uganda for upgrading informal trade handling practices and equipment (milk containers).
- For achieving farmers' commitment for good husbandry, milking and post-milking practices it proved to be more successful to show the financial benefits of improved practices, to develop farmers' skills in animal husbandry, in milk hygiene, in marketing and in the negotiation of supply contracts with dairy processors than trying to enforce inappropriate standards.
- Changing from current quantity to quality based payments. Quality-based payments are primarily meant to cover additional costs of compliance (investment into equipment, initial and continuous skills development and more laboratory technologies). In some cases, a price premium is paid to motivate farmers to adopt good practices.

With reference to the quality-based payment system for motivating farmers to produce bet-
In 2010, the Kenya Dairy Board in cooperation with donor projects and the industry developed a protocol for differential payment for quality. In Ethiopia, a network of donor projects (SNV and USAID), the Ministry of Agriculture and the Ethiopian Meat and Dairy Technology Institute (EMDTI) have started a pilot project in one region of the country where quality-based premium payments shall become mandatory. It remains to be seen whether this initiative will be successful in establishing quality assurance systems along the dairy value chain.

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Current status of regulatory and standard protocols and regional harmonisation

Box 12: Current status of regulatory and standard protocols and regional harmonisation for dairy products

Regional standards:

- EAS: Specifications (based on CAC) for UHT milk, yoghurt, dried whole milk and skimmed milk powder, raw cow milk, pasteurized milk, dairy ice creams and dairy ice creams, milk based baby food and sweetened condensed milk
- EAS: Determination of fat and solid content, nitrogen, etc. for butter, milk powders, milk and dried milk, butter milk and butter milk powder
- EAS: Inspection sampling/inspection by variables for milk and milk products
- COMESA adopted the EAS as draft standards in 2010
- COMESA and EAC: draft SPS protocols due for approval by the respective Council of Ministers (status May 2011)

National regulations/standards – the example of Kenya:

- Regulations stipulated in the Dairy Industry Act governed by the Kenya Dairy Board:
  - The regulations describe the requirements for all processes along the milk/dairy product value chain including specifications for equipment and surveillance of quality. The regulations have been reviewed in 2010.
- Standards governed by KEBS:
  - More than 90 vertical standards have been developed since the 1970s. Recently published: ‘Good Manufacturing Practices Guideline for the Dairy Industry’ (for training of owners, managers and staff of milk bulking centres, milk bars and processing plants); ‘Standard Code of Hygienic Practice for Production, Handling and Distribution of Milk and Milk Products’.
  - In Ethiopia, the Ministry of Agriculture in cooperation with SNV, USAID and EMDTI intends to pilot a mandatory premium price system for quality milk in one region.
  - In Kenya, the Kenya Dairy Board (regulatory body) in cooperation with donor projects and the industry developed a protocol for differential payment for quality raw milk.
  - In Kenya, the Department of Veterinary Services developed a residue supervision plan for camel milk that is supposed to meet EU requirements.

Private voluntary standards/branding:

- In Kenya, leading private milk processors are certified (HACCP, ISO 22000), offer brand products and started to establish quality assurance systems from paddock to processing plant using differential/premium payment systems.

Further stakeholders involved in standards development and harmonisation (selection, not representative):

- Regional: EAC Dairy Technical Committee, EADRAC (East African Dairy Regulatory Authorities Council), Eastern and Southern African Dairy Association (EASADA), International Livestock Research Institute (ILRI), ASARECA, COMESA reference laboratory in Zambia
- National: National Standards Bureaus e.g. KEBS, other regulators e.g. Kenya Dairy Board, limited number of public/private laboratories in Partner States, Ethiopian Meat and Dairy Technology Institute (EMDTI), national producers, traders, processors and consumers associations
- Supporters: East Africa Dairy Development Project (EADD), USAID Kenya and Ethiopia, SNV Ethiopia, DfID in Kenya, etc.
Opportunities for supporting the harmonisation and implementation of regulations and standards

- consider regional specifics, involve private sector more strongly in the review of existing and development of new standards;
- settle disputes on NTBs established in a bid to ban imports from EAC/COMESA Member States from competing with domestic production;
- strengthen public sector capacities for enforcement (by streamlining mandates, upgrading legislation, adapting and adopting harmonised standards at national level, developing capacities within the QI);
- develop capacities of public and private service providers with regard to upgrading advisory services offered to VC operators for the development of quality assurance systems; and
- build private sector (input providers, farmers, traders, processors as well as business operators offering transport and logistics services) capacities in food safety/quality assurance along the value chain.

Proposed way forward for upgrading regulatory and standard protocols and regional harmonisation

**Standard development and harmonisation at REC level:**

- review EAS to assure that international benchmarks (CAC) are met while adapting to regional specifics, especially as regards the economic viability of smallholder production, the essential role of informal trader and the traditional way of consuming raw milk only after boiling (reduction of health hazards) as well as the occurrence of endemic disease strains etc.;
- address further areas for cooperation and harmonisation (areas currently under consideration at EAC: standards for animal nutrition, animal welfare, feed production, feed formulation and packaging (e.g. appropriate package unit sizes for smallholders); coordination of cross border SPS measures, animal disease investigation, prevention, monitoring, reporting and surveillance (incl. early warning system); coordination of veterinary/livestock capacity building; support of EAC regional reference laboratory; involvement of VC operators to assuring food safety and quality);
- implement agreed procedures for conformity assessment/mutual recognition of public quality marks of the National Standards Bodies of EAC/COMESA Member States in cross-border trade; and
- support private sector investments into collection centres and cool chain transport through support programmes coordinated at regional level in order not to raise concerns over unfair competition and not to distort markets.

**Public-private dialogue in Member States:**

- review stakeholder participation in the development of standards in order to better reflect the dairy VC reality.

**Implementation in Member States:**

- achieve high-level political commitment for implementing the necessary changes in the regional dairy sector;
- review overlapping mandates between different ministries and regulatory bodies;
- facilitate a gradual shift from end-product to process control (including responsibility of VC operators for food safety and quality and traceability systems from livestock systems up to retailing);
• implement campaigns to raise awareness on and stimulate demand for quality milk and milk products among consumers;
• apply a bottom-up and step-by-step approach to upgrading the VC, to developing quality assurance systems along the VC and to up-scaling regulations and standards in the smallholder/informal trade sectors;
• upgrade/up-scale capacities of public and private training and extension services in milk safety and quality assurance from paddock to collection centre (e.g. Good Husbandry Practices (GHP), Hazard Analysis Critical Control Point (HACCP), Good Manufacturing Practices (GMP) and possibly 1st stage processing at collection centres);
• support existing private sector initiatives for establishing quality assurance systems along the VC (with processors providing training and mentoring, equipment and sometimes credits to farmers through embedded service systems);
• develop and implement a system for capacity building (training and mentoring) on safe milk handling, quality assurance and certification for informal traders, owners/managers/staff of collection centres, milk kiosks, milk bars and processing plants;
• encourage and support investments into appropriate (low cost) technologies (e.g. transport, collection, processing);
• facilitate access to public or private decentralised, low-cost QI and animal health services;
• strengthen laboratory and certification services (accreditation, equipment, residue monitoring system, enforcement capacities etc.); and
• upgrade skills for conformity assessment (e.g. inspection of GMP/HACCP systems at collection points and dairy plants; testing and monitoring of veterinary drug residues, of physical, chemical and microbiological (e.g. aflatoxin) contaminants).

3.2.4 Horticulture-products

Brief introduction to value chain features and performance

The situation of the Eastern and Southern African horticultural export sub-sector has been perfectly described by Tschirley (2010, p. 1): “For ten to fifteen years through the mid-2000s, the literature on ‘horticulture’ in Africa was largely synonymous with horticultural exports to developed countries. Kenya was the outstanding success, and many countries – aided by donors – attempted to emulate it. Yet success has been more difficult to achieve in other countries of the continent, with major investments by government, donors, and private sector over periods of years often showing little result. At the same time, rising food safety and environmental standards in developed countries have made it more difficult for new countries to enter the market and for smallholder farmers in established countries to remain in the market. Thus, while export horticulture is and should remain an important focus for investment in some countries, overall enthusiasm regarding its growth prospects and its ability to reduce poverty has fallen over the past five- to ten years.”

As a consequence, awareness has risen on the importance and growth prospects of domestic and regional horticultural markets. The Fresh Produce Exporters Association of Kenya (FPEAK) was among the first to also see an interest of the domestic export industry in broadening the basis of smallholder farmers capable to supply
quality products not only for exports overseas but also to local and regional markets (Kenya-GAP domestic/regional scope, see box below). At the same time, supermarkets in a number of Eastern and Southern African countries developed a strong interest in assuring consistent supplies of safe and quality fresh produce.

Box 13: KenyaGAP Domestic/Regional Scope
– a private standard serving private and public food safety and quality interests

KenyaGAP domestic/regional scope
“While the international benchmarking of KenyaGAP further raised the reputation of the Kenyan horticultural export sector, it is increasingly recognized that industry self-regulation also has to guide supplies to the domestic market. Risking losing market shares to growing imports from Egypt and South Africa, it increasingly dawns on Kenyan producers that there is considerable potential in the domestic market, which stands at 94% in volume and $1 billion in value while the export sector is at 6% in volume but realizes as well $1 billion a year. … 'Domestic/regional scope' means adaptation to smallholder capacities despite full recognition by GlobalGAP (e.g. less documentation needs, lower frequency of water/soil analysis, area-based analysis along water channels) (Will and Orina, 2009).”

“Driven by the interest of the horticultural sector to scaling up the adoption of Good Agricultural Practices (GAP) from the export to the domestic market, FPEAK as the owner of the KenyaGAP standard joined forces with the Kenya Plant Health Inspectorate Services (KEPHIS) to assist supermarket chains to establishing preferred supplier schemes for farmers complying with the so called KenyaGAP Domestic Scope, which was introduced in 2009. Even if the shares of supermarkets in the commercialization of horticultural produce are still small and will most probably not grow fast, FPEAK expects to widen the approach to the wholesale sector in the foreseeable future. The objective is to reach a critical mass of smallholder producers to improve on production and harvesting practices (ibid.).”

In 2009, the Kenya Bureau of Standards (KEBS) “accepted KenyaGAP certification as equivalent to its own approval for the local market” (KHDP, 2009, p.2) and “Thus, under Green Pass, Kenya could, if it chose, put KEBS as its national Green Pass authority. KEBS would have the full right to accept KenyaGAP protocols as its own (i.e., as the regionally accepted national standard) … This active public-private collaboration on standards, with multi-stakeholder private bodies taking a major role in defining the details of workable and appropriate standards (and updating these over time as conditions change), must be a fundamental characteristic of all standards setting in future if such standard setting is to promote rather than hinder trade (Tscharley, 2010, p.18).” Further public partners, besides KEBS and KEPHIS, are the Ministry of Agriculture and the Horticultural Crops Development Authority (HCDA).

Upscaling GLOBALGAP in East Africa
“Under a … project grant signed with TradeMark East Africa (TMEA) in Nairobi last week, Kenya will lead other horticultural producers in East Africa to develop and implement a regional version of the Global Good Agricultural Practice standards. … A robust rollout of trainings and certification will … be undertaken across the region certifying a pilot number of grower groups thus creating environment for up-scaling it in a future phase. … Adopting uniform standards in production and packaging will increase inter-regional trade in fresh produce, making it a key growth sector for all the five members of the EAC. … Industry statistics indicate that about 40 percent of fresh produce harvested annually is lost due to post harvest spoilage. These threats to trade can only be mitigated by a universal application of globally recognised standards by the region’s producers (Omondi, 2011).”

Sources: KHDP, 2009, p.2; Omondi, 2011; Tscharley, 2010, p.16ff; Will and Orina, 2009, p.15 (verbatim citations)
Driving forces for the increased interest in adopting standards also for the domestic and regional markets are changing consumer perceptions of food quality and concerns about food safety following urbanisation and the growth of the middle-income consumer segment in urban centres. Even if the expansion of supermarket chains in Eastern and Southern Africa does not follow the same rapid growth as in Latin America or South East Asia and the existing wholesale marketing system will remain the chief distribution channel to urban centres for many years to come, it can be expected that food safety and quality standards will also enter into these traditional marketing systems provided the cost-benefit ‘plus’ of compliance along the VC (e.g. reduced transaction costs, reduced wastage, improved market access not only to supermarkets but also to hotels and restaurants and in the future gradually also to wholesale markets and easy upgrading to also serve for exports to the global market) can be communicated to VC operators.

Of special interest for fresh produce are also organic standards. The case of the harmonised East African Organic Products Standard (EAOPS) has been described in box 4 (section 3.1.2).

Tanzania is particularly strong in regional exports, especially with supplying tomatoes, onions, oranges and bananas to Kenya, Malawi, the Comores and others (for example, about 50% of onions consumed in Kenya originate from Tanzania and are sold through Wakulima, the major wholesale market in Nairobi). Tanzania also supplies some of the Kenyan exporters of green beans. The structures for regional trade in fresh produce are quite similar to those for domestic trade, with both relying on traditional largely informal and wholesale distribution channels. However, this does not apply for supplies to supermarkets for example in Uganda, Tanzania and Rwanda, which import fruit and vegetables from South Africa (mainly fresh fruit and fruit juices) and Kenya (mainly vegetables and tropical flowers).

The development of quality assurance systems for domestic and regional horticultural value chains is mainly hampered by:

- inadequate transport and logistics infrastructure (especially feeder roads and partly cold chain) for bringing perishable fruit and vegetables from smallholder farms through informal trade to wholesale markets;
- high post-harvest losses due to inappropriate farming, harvest, post-harvest, transport and marketing practices;
- the poor infrastructure and management of most wholesale markets in Eastern and Southern Africa;
- the strong position of trader cartels in many wholesale markets not interested in transparent transactions (however, if awareness can be created about the benefits of quality assurance systems, some innovative traders may develop an interest in upgrading the capacities of their supplier networks);
- despite existing capacities (among others due to poor qualities, inconsistent supplies, low volumes and high transaction costs, etc.) limited share of processed fruit and vegetables that would relieve the market during the peak season;
- inadequate technical regulatory and standards frameworks including lack of provisions, not to speak about implementation systems, for SPS measures both at national and EAC and COMESA (harmonised) levels;
nonexistent infrastructure and accredited capacities (within the Quality Infrastructure) for affordable testing especially of pesticide residues close to the field and at wholesale markets;

- nonexistent systems for mutual recognition of standards in cross-border trade; and

- cumbersome border procedures leading to long waiting times having a bearing on the quality of perishable products.

Current status of regulatory and standard protocols and regional harmonisation

<table>
<thead>
<tr>
<th>Box 14: Current status of regulatory and standard protocols and regional harmonisation for horticultural products</th>
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<tbody>
<tr>
<td><strong>Regional standards:</strong></td>
</tr>
<tr>
<td>• EAS: 48 standards, e.g. specifications for fresh fruit and derived products; specifications for fresh vegetables and derived products; fruits, vegetables and derived products in general (e.g. sampling and testing methods); East African Organic Products Standard (EAOPS)</td>
</tr>
<tr>
<td>• COMESA: intention to adopt the EAC standards</td>
</tr>
<tr>
<td>• COMESA and EAC: draft SPS protocols due for approval by the respective Councils of Ministers (see section 3.1.1)</td>
</tr>
<tr>
<td><strong>National regulations/standards – the example of Kenya (most advanced regulatory and standards system in the region):</strong></td>
</tr>
<tr>
<td>• Standards: KEBS with over 120 standards mainly dating back to the 1980s/1990s for (i) fresh and preserved fruit and vegetables, (ii) hygiene requirements, adoption of ISO standards (iii) transport and logistics for fruit and vegetables.</td>
</tr>
<tr>
<td>• Standards and regulations: HCDA, the Kenyan regulator for the horticultural sub-sector with responsibility for the development of the national horticultural policy, of production standards and a code of conduct.</td>
</tr>
<tr>
<td><strong>Private voluntary standards/branding:</strong></td>
</tr>
<tr>
<td>• KenyaGAP domestic/regional scope (see box 13)</td>
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<tr>
<td><strong>Product-specific Quality Infrastructure:</strong></td>
</tr>
<tr>
<td>• Regional: COMESA Centre of Phytosanitary Excellence (COPE) in Kenya</td>
</tr>
<tr>
<td>• National: In export-oriented countries like Kenya, to a certain extent also in Ethiopia and Tanzania, the quality infrastructure for horticultural export products has got a sound basis. For produce destined for local/regional markets, however, access to qualified (not to speak about accredited) laboratories and to decentralised low-cost analysis services (e.g. pesticide MRLs, soil and water analysis) is a challenge.</td>
</tr>
<tr>
<td><strong>Stakeholders involved in standards development and harmonisation (selection, not representative):</strong></td>
</tr>
<tr>
<td>• Regional: Horticultural Council of Africa (HCA), a federation representing national associations across Eastern and Southern Africa and intending to become a pan-African membership organisation</td>
</tr>
<tr>
<td>• National: National Standards Bureaus e.g. KEBS; other regulators e.g. HCDA; National Technical Committee on SPS; National Plant Protection Organisations (NPPOs) such as Kenya Plant Health Inspectorate Services (KEPHIS); national associations such as FPEAK, KenyaGAP Standards Management Committee, Ethiopian Horticulture Producers and Exporters Association (EHPEA)</td>
</tr>
<tr>
<td>• Supporters: USAID Kenya Horticulture Development Program (KHDP, finished), USAID Kenya Horticulture Competitiveness Project (KHCP, successor KHDP), Danish International Development Agency (DANIDA), GIZ Private Sector Development in Agriculture (PSDA), European Union (e.g. new horticultural project planned for Tanzania), International Fund for Agricultural Development (IFAD), World Bank, TradeMark East Africa (TMEA)</td>
</tr>
</tbody>
</table>
Opportunities for supporting the harmonisation and implementation of regulations and standards

- strengthen public sector capacities for enforcement (by streamlining mandates, upgrading legislation, adapting and adopting harmonised standards at national level, developing capacities within the QI);
- develop capacities of public and private service providers with regard to upgrading advisory services offered to VC operators for the development of quality assurance systems;
- build private sector (input providers, farmers, traders, processors as well as business operators offering transport and logistics services) capacities in food safety/quality assurance along the value chain; and
- seize opportunities from existing good practices in public-private partnership approaches for adapting and trickling-down international standards to local and regional markets (KenyaGAP domestic/regional scope).

Proposed way forward for upgrading regulatory and standard protocols and regional harmonisation

**Standard development and harmonisation at REC level:**

- support Member States to implement the REC’s SPS protocols for mutual recognition and smooth organisation of regional trade;
- involve the (pan-African) HCA into the development and regular review of regional standards and SPS protocols.

**Public-private dialogue in Member States:**

- build public-private partnerships for building capacities for standards compliance in all Member States similar to the KenyaGAP approach (e.g. through the new TMEA project mentioned above).

**Implementation in Member States (objective: step-by-step approach to formalise the sector):**

- realise campaigns for creating awareness among consumers, producers and traders on costs and benefits of compliance with food safety and quality regulations and standards;
- develop Food Safety Guidelines for KenyaGAP and a related smallholder manual for food safety based on (domesticated) provisions of HACCP, ISO 22000 and British Retail Consortium (BRC);
- set up a pool of trainers for up-scaling KenyaGAP domestic/regional scope for supplies to domestic/ regional retail chains (short-term) and wholesale markets (medium to long-term);
- build private sector capacities for auditing (first/second party internal auditing at farmer group level and second party lead auditing);
- translate standards into more simple and illustrated farmer guides, train smallholder farmers, backstop farmers to assure learning effect and compliance and monitor progress to assure quality of skills development;
- build capacities of 2nd tier suppliers (consolidators, brokers, traders) as part of the preferred supply chains to supermarkets and as entry point into the wholesale market chain (training on GHP and backstopping of farmers);
- improve pest risk assessment, management and communication systems (e.g. complement with early warning systems, data bank and monitoring, communication and surveillance systems);
- upgrade capacities of and accredit laboratories (analysis of mycotoxins, heavy metals, pesticide residues, etc.).
• develop decentralised local level services (mobile/satellite labs) for access to low cost testing/analysis services close to farmers’ fields;
• improve pesticide registration, monitoring and mutual recognition; and
• develop simple traceability systems for easy adoption by smallholder farmers.

3.2.5 Maize
Brief introduction to value chain features and performance
As the most important staple food in Sub-Saharan Africa, the importance of maize consists both in its subsistence and commercial values. Predominantly grown by smallholder farmers under rain-fed conditions without using improved seeds and hardly applying fertilisers, the productivity is low and yields are fluctuating greatly between yearly wet and dry seasons and between years. As a result, small-scale farmers’ surplus supplies to markets are highly volatile and so are market prices. With changing rainfall patterns, ever-shorter intervals between drought years and extending drought periods, balancing between surplus and deficit regions in Eastern and Southern Africa through intra- and interregional trade becomes ever more important.

Important cross-border trade channels exist in eastern Uganda and northern Tanzania supplying deficit markets in Kenya, in northern Zambia supplying deficit markets in the Democratic Republic of Congo (DRC) and in northern Mozambique supplying maize markets in Malawi and intermittently also in eastern Zambia. Even if trade patterns have changed in recent years, especially following Malawi’s and Zambia’s fertiliser subsidy programmes, the phenomenon of fluctuating cross-border trade in times of food shortages in areas that are frequently in deficit of food remains the same. Despite these intra-regional trade flows, both formal and informal regional trade remains marginal if compared to imports from and exports to third countries.

Recognising the importance of cross-border trade for balancing between maize surplus and deficit areas, there is an urgent need to integrate national maize policies into the regional context. Facilitating inter- and intra-regional trade in maize through the design and implementation of appropriate regulations and standards and the establishment of a well-functioning regional Quality Infrastructure will contribute to opening markets for smallholder farmers, to improving the food security situation in the sub-region and to reducing price volatility.

This is of particular importance for reducing the risk for private sector investments along the maize VC required for initiating a boost in production necessary for enabling the sub-region to satisfy the expected dramatic growth in the demand for maize in the decades to come. According to Haggblade et.al. (2008, p.1), “As a result, production of food staples – for growing urban markets and food-deficit rural areas – represents probably the largest growth opportunity available to African farmers. Facilitating expansion of these markets will, therefore, be critical for efforts at stimulating agricultural production, broad-based income growth and poverty reduction.”

Since informal maize traders act as efficient and essential contributors to better balancing maize surplus and deficit areas, due attention has to be paid to integrate informal cross border trade into approaches to building quality assurance
Although the Warehouse Receipt System could become a vehicle for food safety and quality assurance systems along local and regional VCs and for the formalisation of informal trade, the introduction of the WRS has been challenged by extended drought periods, resulting in major production deficits especially in Kenya and related unpredictable policy interventions. Repeated politicisation of the maize trade was experienced in Kenya, where parastatal buying-up of maize, storage and release from storage has been revived during the crisis at the end of the 2000s and in Tanzania where an export ban was introduced in early 2011 in a bid to protecting the domestic market from inflation of maize prices following supply shortages in neighbouring Kenya. Both measures proved to be detrimental to farmers’ revenue opportunities derived from increased prices and are hence de-motivating farmers from investing into production of maize and using the Warehouse Receipt System. Furthermore, the opportunity was missed to testing and establishing the WRS for balancing maize supplies.

Another area of concern for increasing staple food production in the region is the access to and smooth cross-border trade of improved varieties and certified pest- and disease-free seeds. In a bid to changing formerly fragmented and weak into well-performing seed VCs, the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) has taken the lead in rationalising and harmonising regulations and standards in cooperation with relevant public and private stakeholders. In co-operation with COMESA and EAC, the initiative covers the entire East and Central Africa (ECA) region and besides maize also cassava.
In summary, the development of quality assurance systems for domestic and regional trade in maize is hampered by the following factors:

- The balancing between maize surplus and maize deficit areas is usually not left to market forces. Given the essential position of maize in human diet and as basic ingredient for animal feed, the maize market is highly politicised through trade controls, mainly import and export bans. Measures taken in an intermittent and unpredictable way create market risks that weaken incentives for farmers to increase production and for farmers and traders to adopt good practices for improving food safety and quality.
- The high level of informality in the maize market with about 80% of trade in agricultural produce and food in the region supposed to be informal. The main reasons for the high share of informal trade are cumbersome border procedures, poor transport and logistics infrastructure in particular in the case of small consignments and of perishable products. As a consequence, the formalisation of informal trade and compliance with regulations and standards is a serious challenge for VC operators.
- Failure of creating awareness on, of giving price incentive for better quality and of building capacities for quality assurance, neither smallholder farmers nor small-scale informal assemblers and traders are concerned about quality and moisture standards. In contrast, many farmers view such standards as barriers to accessing more remunerative outlets.
- The predominantly weak inland and border inspection systems for the control of compliance hinder enforcement of regulations and standards despite concerns especially about the moisture content of maize, which is supposedly quite frequently higher than stipulated in the EAC standards.
- Further challenges hindering the emergence of quality assurance systems along the maize value chain are similar to those given for the other commodities in the preceding sections: predominance of subsistence production, inadequate transport and logistics infrastructure, inefficient collection and distribution systems, lack of provisions for SPS measures, nonexistent infrastructure for affordable testing of maize quality close to farmers’ fields and near to the informal trade, non-existent systems for mutual recognition of standards for cross-border trade and unjustified Non-Tariff Measures.
Opportunities for supporting the harmonisation and implementation of regulations and standards

- achieve Member States’ commitment for the implementation of the existing expedient road map for harmonisation and elimination of unjustified Non-Tariff Barriers;
- strengthen public sector capacities for enforcement (by streamlining mandates, upgrading legislation, adapting and adopting harmonised standards at national level, developing capacities within the QI);
- develop capacities of public and private service providers with regard to upgrading advisory services offered to VC operators for the development of quality assurance systems;
- build private sector (input providers, farmers, traders, processors as well as business operators offering transport and logistics services) capacities in food safety/quality assurance along the value chain; and
- up-scale existing good practices in public-private partnerships for rolling out standards in (formal and informal) local and regional markets (EAGC in cooperation with public

Current status of regulatory and standard protocols and regional harmonisation

**Box 15: Current status of regulatory and standard protocols and regional harmonisation for maize**

**Regional standards:**
- EAC: 6 relevant standards and 3 drafts for seeds, primary and processed products including specifications for: maize seeds for planting, maize grains, dry milled maize products, fortified maize flour, maize gluten feed, maize bran as animal feed, maize meal and maize products; the drafts are due for approval by the Council of Ministers (May 2011).
- EAC: in August 2011, Member Countries agreed to harmonise food fortification standards (adding of nutrients to foodstuffs, such as vitamins and minerals, during processing) to increase regional trade in fortified food like maize, cassava and wheat.
- ASARECA on behalf of ECA (East and Central Africa Region): relevant standards covering: regional variety release, science-based quarantine pest list, plant breeders rights, seed certification and bio-safety regulations
- EAC and COMESA coordinate the harmonisation of maize standards through ASARECA.

**National regulations/standards:**
- The Kenyan KEBS standards formed the basis for the harmonisation at regional level.

**Private voluntary standards/branding:**
- EAGC grades and standards for the Warehouse Receipt System.

**Product-specific Quality Infrastructure:**
- COMESA: COPE: planned structures and systems for the accreditation of agro-dealers trading in seeds.
- EAGC: intention to set up a 'from farm to consumer' surveillance system in the market incl. aflatoxin monitoring.

**Stakeholders involved in standards development and harmonisation (small selection, not representative):**
- Regional: ASARECA, East African Grains Council (EAGC), Alliance for Commodity Trade in Eastern and Southern Africa (ACTESA), East African Farmers Federation (EAFF), Eastern Africa Seed Committee (EASCOM), International Maize and Wheat Improvement Center (CIMMYT)
- National: National farmers, seed producers, traders and seed traders associations such as the Uganda Seed Trade Association (USTA), national plant variety protection bodies, national seed certification bodies such as the Tanzania Official Seed Certification Institute (TOSCI)
- Supporters: USAID ACDI/VOCA and USAID COMPETE in Kenya, European Commission, World Bank

**Source:** ???
partners, committed traders/processors and support from donor projects).

Proposed way forward for upgrading regulatory and standard protocols and regional harmonisation

Standard development and harmonisation at REC level:
- harmonise aflatoxin Maximum Residue Levels (MRLs) across Member States;
- review standards at least every five years to assure alignment with developments in markets and technologies.

Public-private dialogue in Member States:
- expand the existing public-private cooperation to a public-private approach to assuring food safety and quality (see section 4.3.3);
- change attitudes of public and private stakeholders from focusing on the promotion of productivity and volumes to concepts combining the increase in quantities with the improvement of qualities.

Implementation in Member States:
- consider public health issues and the important role of harmonised regional trade for food security in policy-making;
- educate consumers to understand hazards of contaminated maize and hence gradually change buying habits in a bid to improving consumer protection and public health;
- create awareness on costs and benefits of quality assurance systems on productivity and profit margins to achieve the commitment of small-scale growers, traders and millers for upgrading their practices;
- develop a step-by-step approach for developing food safety and quality assurance systems along (formal and informal) maize VCs with special focus on reducing and controlling aflatoxin contamination;
- up-scale existing maize standards training using existing training material (e.g. ACDI/VOCA-Kenya, 2010; USAID East Africa, ACTESA, COMESA, 2011; COMESA, ACTESA and EAC, n.d.);
- support the establishment and operation of the (planned) EAGC Grain Training Institute based on a private sector driven approach (including accreditation by Member States’ public education systems);
- support the establishment and operation of the (planned) EAGC Aflatoxin Monitoring System at regional level;
- support the rolling out of EAGC’s warehouse licensing programme as part of quality assurance systems along VCs;
- harmonise sampling/testing methods, set up a regional databank, equip decentralised satellite (small) laboratories and build capacities of public and private sector field staff for sampling and testing;
- develop low-cost decentralised systems for aflatoxin testing and support access to diagnostic kits for farmers/traders;
- develop/promote viable systems for differential payments based on quality grades in line with the introduction of the WRS;
- develop enforcement systems capable of controlling deceptive practices (e.g. mixing of contaminated lots with non-contaminated maize lots used to dilute aflatoxin-levels);
- create awareness on and facilitate smallholders’ access to improved varieties and pest and disease free maize seed;
- develop low-cost/simplified traceability systems (required by export-oriented buyers and institutional customers); and
- develop low-cost but trusted dispute settlements systems.
4 Conclusions and recommendations

EAC and COMESA have achieved a lot to date with regard to enhancing economic integration, to drafting SPS frameworks, harmonising regulations and standards and initiating the establishment of a Quality Infrastructure that builds on existing national bodies able to take on responsibilities at REC level and, only where necessary, complemented by newly established regional entities. Member State governments express their commitment to promoting regional trade and the private sector (understood as including smallholder farmers, informal traders just like medium and large-scale traders, processors and investors) is not only keen to seizing cross-border trade opportunities but already does so, although largely in the way of informal trade.

Since compliance with regulations and standards is a crucial factor of (formal) market access and of VC competitiveness on the one hand and efficient market surveillance is essential for smooth cross-border administrative clearance and low transaction costs in regional trade on the other hand, harmonisation of legal frameworks and development of institutional capacities for mutual recognition and dispute settlement are key to achieving the CAADP pillar 2 objective ‘market access’ and the objectives of the Enhanced Integrated Framework (EIF).

Despite the progress made in realising the Free Trade Agreements thus far, much remains to be done in both RECs since the success stories on the one side are accompanied and threatened by shortcomings at regional and national levels on the other side.

Against this background, this section draws conclusions and gives recommendations based on the description of the current situation given in the first part of this study. Section 4.1 takes a closer look at strengths, weaknesses, opportunities and threats (SWOT), section 4.2 discusses the underlying objectives of the urgent need for upgrading regional and national regulations and standards as well as implementation capacities, section 4.3 elaborates on basic concepts for furthering the development and harmonisation of Member States’ and REC-level compliance and surveillance systems and section 4.4 develops on recommendations for an upgrading strategy.

Since the results given in the following sections are only based on a rapid assessment and not on an in-depth analysis at country and REC levels, the conclusions and recommendations are subject to further research and need to be adapted to specific conditions at the level of Member States and at the level of the regional structures of EAC and COMESA.

4.1 Summary SWOT of regional harmonisation and mutual recognition

In a bid to facilitate the identification of entry points for upgrading national and regional private sector compliance and public sector market surveillance systems, the study’s findings on strengths, weaknesses, opportunities and threats (SWOT) are summarised in the following sections. For a more detailed analysis of the SWOT at the level of the five selected value chains, the interested reader is referred to sections 3.2.1 to 3.2.5.

4.1.1 Strengths

The findings of the rapid assessment suggest that the harmonisation of regulations and
standards as well as the design of the Quality Infrastructure are quite advanced, both in EAC and COMESA. For further upgrading and up-scaling the existing structures for food safety and quality assurance at REC level and in Member States, EAC and COMESA can draw on and learn from the following good practices:

- the subsidiarity principle guides the harmonisation of regulations and standards within the EAC (i.e. the REC protocols, laws and legislations supersede national ones);
- the harmonisation of technical standards is quite advanced within the EAC and COMESA intends to adopt EAC’s compendium of harmonised standards;
- the principles and procedures for the development and harmonisation of tri-partite standards are drafted (EAC, COMESA, SADC);
- the draft SPS protocol (EAC) and draft SPS framework (COMESA) are due for approval by the respective Councils of Ministers (status May 2011);
- the development of region-specific standards along VCs is guided by the COMESA Green Pass Certification, which will facilitate equivalence and mutual recognition;
- the SPS unit (COMESA) assists the setting up and management of SPS focal points for information on and monitoring of SPS Measures in Member States;
- the establishment of a regional Quality Infrastructure in coordination with Member States’ QI is ongoing (EAC and African Union);
- the planning of early warning systems for pests and diseases, the establishment of disease free zones and traceability systems are ongoing (EAC);
- the ongoing development of coordination instruments for the control of animal diseases will improve the management of transboundary animal diseases (EAC);
- the national public-private NTB monitoring committees have started reporting and advocating for the removal of NTBs (EAC and COMESA);
- the development of a time-bound programme for the elimination of NTBs facilitates monitoring of Member States’ commitment to remove non-tariff barriers to trade (EAC);
- the development of a Simplified Trade Regime (STR) facilitates border formalities for small-scale informal traders (COMESA in cooperation with EAC);
- the regional systems for accreditation and mutual recognition, for regional standards and quality assurance policy are in the planning stage (COMESA);
- the accreditation of further public and private laboratories and certification bodies has been initiated in a bid to develop a network of satellite laboratories linked to centres of excellence (COMESA);
- the reference laboratories/centres of excellence for food safety, animal and plant health assigned by COMESA are currently upgraded;
- the private sector in the form of regional and national business organisations starts to take the lead in developing industry and trade codes of practice (EABC, EAGC, FPEAK, etc.); and
- the process of harmonisation and implementation of regulations and standards for food safety and quality is supported by donor programmes.

4.1.2 Opportunities
Quite some initiatives for harmonising regulations and standards on the side of EAC and COMESA, for improving compliance with food safety and quality provisions on the side of VC
operators and for upgrading market surveillance capacities on the side of Member State governments have been initiated in recent years. These measures confirm that attitudes are changing and awareness is increasing that food safety and quality and the harmonisation of regulations and standards for domestic and cross-border trade are key factors for reducing food insecurity and unlocking avenues for pro-poor growth. The following ongoing or planned measures and projects are starting points, from which opportunities can be seized for further upgrading and up-scaling the development and harmonisation of regulations and standards systems within EAC and COMESA:

- the governments of Member States are generally committed to building the Regional Economic Communities, for which cross-border trade and hence harmonisation of standards plays a crucial role;
- the awareness is increasing both on public and private sector sides that the establishment of mutual recognition and dispute settlement mechanisms is essential for removing barriers to regional trade;
- the abolishment of NTBs will supposedly contribute to decreasing transaction costs and possibly to increasing profit margins and hence to promoting production and cross-border trade;
- the planned common systems for auditing, testing and monitoring (QI) will provide economies of scale for Member States and hence reduce initial investment and long-term operational costs;
- the existing country-specific competitive advantages offer trade opportunities for balancing food surplus and deficit areas;
- the opportunities for reaping benefits both for Member States’ economies and for farmers, traders and processors from the formalisation of informal cross-border trade are supposedly considerable;
- the market access requirements in international markets are rising giving more incentives for cross-border trade;
- the global demand for raw materials and value-added food products is increasing as well giving further impetus to intra- and inter-regional trade;
- the business sector (processors, large-scale wholesalers, exporters and supermarkets) is increasingly interested to seize opportunities from cross-border trade;
- the establishment of assurance systems for cross-border food safety and quality along VCs will contribute to reducing current high levels of wastage;
- the envisaged public-private cooperation for food safety and quality will contribute to reducing transaction costs and wastage;
- the adaptation of manuals and guidelines to the absorption capacities of VC operators (especially smallholder farmers and informal traders) will advance adoption; and
- the production and transaction costs, post-harvest losses and rejection rates may be reduced once quality assurance systems are implemented, which will give further incentives to producers and traders.

4.1.3 Weaknesses
While a lot has been achieved to date as reflected in the strengths, and opportunities are promising, the main challenge, however, remains to achieve the commitment and to develop the capacities of public and private sector stakeholders in Member States and at REC-level for implementation. Existing strengths are not yet harnessed and opportunities not yet seized due to the following weaknesses:
CONCLUSIONS AND RECOMMENDATIONS

- progress in harmonisation, mutual recognition and dispute settlement at REC level and in Member States is slow;
- national policies and implementation strategies for food safety/SPS are lacking in Member States;
- legislation is partly outdated and enforcement capacities are weak in Member States;
- mandates for regulation and surveillance are fragmented and overlapping in most Member States;
- systems for mutual recognition of testing, certification and inspection are not yet in place;
- harmonisation of standards for Maximum Residue Levels (MRLs), for animal feeds and for veterinary drugs are pending;
- administrative capacities for coordinating and supporting the implementation of SPS and the SQMT Act are insufficient (EAC);
- harmonised and agreed procedures (e.g. Pre-shipment Import Verification of Conformity PIVCO) are not uniformly applied;
- NTBs are frequently misused in a protectionist way (e.g. non-recognition of certificates, repeated border controls, export and import bans);
- inspection procedures are partly implemented in an arbitrary way with multiple official and unofficial charges increase transaction costs;
- conformity assessment institutions (e.g. accreditation, testing in laboratories) are limited in number, are costly and weak;
- decentralised, close to the field and low-cost testing services (e.g. aflatoxin in maize, bacterial counts in milk) are missing;
- regulations, standards and market surveillance systems are so far mainly oriented to end product control, not to process control;
- capacities for and knowledge of appropriate inspection practices (including sampling and testing methods) are insufficient;
- capacities for and knowledge of appropriate practices and technologies for compliance with food safety and quality regulations and standards are largely absent at the level of VC operators;
- skills for analysing economic, social and environmental impacts of regulations and standards as basis for informed policy decision making are missing;
- skills for cost-benefit analysis of regulations and standards as basis for informed business and investment decisions of VC operators are missing;
- technical regulations and standards and SPS requirements are not adequately communicated to input dealers, farmers, traders and processors; and
- economic infrastructure (roads, market places, border posts, storage) is inappropriate and contributes to deterioration of perishable products.

4.1.4 Threats

The following threats have to be taken into consideration when developing policies and planning actions for harnessing the existing strengths, seizing the opportunities and overcoming the weaknesses mentioned above:

- delays in the adoption of harmonised provisions by Member States’ governments;
- risk that policy decisions are based on short-term national priorities instead of expected long-term positive impacts of cooperation with Partner States and coordination within the RECs;
4.2 Proposed upgrading strategy

For establishing regional food safety and quality assurance systems, significant disparities in provisions for food safety and quality across Member States have to be bridged in the following areas:

- mutual recognition of regulations and standards;
- review of national regulations and standards;
- streamlining of mandates;
- development of institutional capacities of the Quality Infrastructure;
- development of human capacities of public and private sector stakeholders; and
- formalisation of national and cross-border VCs.

By working on these issues, problems have to be addressed arising from old and newly emerging Non-Tariff Barriers. Consequently, notification and monitoring systems need to be strengthened and measures taken to address the institutional shortcomings that are at the origin of many NTBs. A major challenge will also be to realise spill-over effects to the pre-dominant smallholder and informal sectors which realise an essential share of cross-border trade.

Evidently, the task is ambitious. For developing the required political, individual and organisational structures and competencies, a holistic approach is required for capacity development, which is defined as “the process of strengthening the abilities or capacities of individuals, or...
ganizations and societies to make effective and efficient use of resources, in order to achieve their own goals on a sustainable basis” (World Bank, n.d.) Capacity development in this sense comprises four dimensions:

- **policy frameworks**, referring to policies, public sector organisational structures and networks at national and regional levels as well as representation in international forums and standard setting organisations
- **institutional capacities**, referring to the development of organisational capacities of public and private entities having a stake in food safety and quality assurance
- **human resources capacities**, referring to skills development of public and private sector individuals with regard to improving their capacities to assuming their sovereign and self-regulation tasks respectively
- **cooperation and networks**, referring to linkages between operators at certain stages of the VC (horizontal), along the VC (vertical), to relations between VC operators and service providers and between private and public stakeholders (public-private dialogue), which all provide platforms for capacity development

The upgrading strategy proposed in the following sections below is guided by the logic of these four dimensions of capacity development.

Thereby, the upgrading strategy shall be guided by:

**the objectives of CAADP pillar 2 market access, specifically:**

• “Accelerate growth in the agricultural sector by raising the capacities of private entrepreneurs (including commercial and small-holder farmers) to meet the increasingly complex quality and logistic requirements of markets...”

• “Create the required regulatory and policy protocol that would facilitate the emergence of regional economic spaces that would spur the expansion of regional trade and cross-country investments.”

**the RECs’ objectives guiding development/enforcement of regulations and standards, that is:**

• EAC objectives:
  - sustainable growth; sustainable utilisation of resources; partnerships with the private sector
• COMESA objectives:
  - sustainable growth; enabling environment for foreign, cross-border and domestic investment

**the objectives of the Enhanced Integrated Framework (EIF), namely:**

• mainstream trade into national development strategies;
• set up structures needed to coordinate the delivery of trade-related technical assistance; and
• build capacity to trade, which also includes addressing critical supply-side constraints.

### 4.2.1 Policy framework and legislation

The following recommendations for upgrading the policy framework, developing implementation strategies and drafting legislation are meant to creating a Business Enabling Environment (BEE) that will contribute to increasing regional trade, promoting investments into value chain upgrading and regional trade and strengthening the competitiveness of regional value chains. The proposed measures are meant
to be implemented in the short to medium term and cover all five selected value chains. For value chain-specific recommendations for upgrading please refer to sections 3.2.1 to 3.2.5.

Following the summary table of recommendations, selected proposals will be explained in more detail:

<table>
<thead>
<tr>
<th>Proposed measures</th>
<th>Status</th>
<th>VCs</th>
<th>Main actors</th>
</tr>
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<tbody>
<tr>
<td>Adopt Good Regulatory Practices, implement ex-ante Regulatory Impact Assessments (RIA) prior to drafting regulations/standards (see explanations below)</td>
<td>pending</td>
<td>all</td>
<td>RECs, relevant Ministries, Public-Private Dialogue</td>
</tr>
<tr>
<td>Adopt COMESA’s SPS framework and EAC’s SPS Protocol as well as technical regulations and standards in Member States</td>
<td>ongoing</td>
<td>all</td>
<td>RECs, relevant Ministries, Public-Private Dialogue</td>
</tr>
<tr>
<td>Continue harmonisation by considering the embedment into international standards (see below) and ensure regular up-dating of harmonised standards at REC-level based on RIA</td>
<td>ongoing</td>
<td>all</td>
<td>RECs, relevant Ministries, Public-Private Dialogue</td>
</tr>
<tr>
<td>Develop national food laws and food safety strategies based on REC frameworks and co-regulation approach (see below): • EAC: 6 relevant standards and 3 drafts for seeds, primary and processed products including specifications for: maize seeds for planting, maize grains, dry milled maize products, fortified maize flour, maize gluten feed, maize bran as animal</td>
<td>initiated in selected Member States</td>
<td>all</td>
<td>RECs, relevant Ministries, Public-Private Dialogue; Civil sector consultation</td>
</tr>
<tr>
<td>Assure political commitment and implementation strategies for the implementation of Mutual Recognition Agreements (MRA)</td>
<td>initiated</td>
<td>all</td>
<td>RECs, relevant Ministries, Public-Private Dialogue</td>
</tr>
<tr>
<td>Assure political commitment and implementation strategies for effective Dispute Settlement (e.g. COMESA Green Pass)</td>
<td>initiated</td>
<td>all</td>
<td>RECs, relevant Ministries, Public-Private Dialogue</td>
</tr>
<tr>
<td>Recognise selected well-performing private/3rd party standards (e.g. KenyaGAP, forthcoming EABC SPS guide, forthcoming EAGC grains code or practice)</td>
<td>pilot projects</td>
<td>all</td>
<td>Private Sector, relevant Ministries, RECs</td>
</tr>
</tbody>
</table>

- Embedment into international standard frameworks;
- Regulatory Impact Assessment (RIA); and
- Co-regulation (public-private partnership for compliance and market surveillance).
Embedment into international standard frameworks

Without intending to describe the complex systems of standard setting, implementation and verification in this paper, the following graph illustrates the complexity of the protocols, into which regional and national public regulations and standards as well as private voluntary standards are to be embedded if aspiring to promote competitiveness of value chains in domestic, regional and global markets.

While answering to the specific situation of the value chains, the institutional setup and the political context as well as to the respective capacities of the public and private sectors in the RECs and their Member States, the development of regulations and standards just like the design of the Quality Infrastructure have to be embedded into multilateral and international frameworks as illustrated. For more details on the international context and embedment into multilateral frameworks, the interested reader is referred to Will and Guenther (2007, p.21 and 24ff).

While the development of regional and national regulations and standards is neither an end in itself nor should time and money be wasted by duplicating existing frameworks, there is certainly a need to adapt available international provisions to the prevailing situation in the RECs. For developing additional REC-specific standards, an essential success factor is that such “regional standards have to provide a plus, something that international standards do not provide (Magalhães, 2010, p. 25).”

A further success factor is that the setting, adaptation and adoption of regulations and standards at national and regional levels have to be planned and implemented through public-private dialogue. In such a way, it will be easier to assure that the provisions answer to the real situation, to create awareness on the benefits and costs of regulation and harmonisation and to achieve the commitment for the implementation of necessary structures and procedures right from the beginning (having in mind the case of the EAC dairy standards, the importance of this recommendation is evident; see section 3.2.3).
The basic schema of the Quality Infrastructure given in graph 3 (section 3.1.4) not only illustrates the complexity of a national and regional Quality Infrastructure but also gives a rough idea of the structures required and the interconnection and interdependencies of the Standards, Quality Assurance, Metrology, Testing (SQMT), certification and accreditation architecture that needs to be in place for assuring food safety and quality as basic condition for functioning national and regional value chains. The graph also illustrates the embedment of the national and regional QI into international settings (mentioned on the right side of the graph) and to the needs of national and regional value chains (indicated on the left side of the graph).

**Regulatory Impact Assessment (RIA)**
As a tool for adopting *Good Regulatory Practices*, a Regulatory Impact Assessment is a systemic approach to critically assess the positive and negative effects of proposed and existing regulations and non-regulatory alternatives. At its core it is an important element of an evidence-based approach to policy making. The conduct of an RIA within an appropriate systematic framework can underpin the capacity of governments to ensure that regulations are effi-
cient and effective (definition cited from: OECD, n.d.).

In the context of EAC, COMESA and their respective Member States, RIAs are of special importance with regard to avoiding that regulations and standards contribute to marginalising and excluding smallholder farmers and informal traders from (national and) regional value chains. This would for example be the case in the dairy sector if the recently revised standards will be applied. Failure of adapting Codex-standards to the prevailing situation in Eastern Africa, the current harmonised standards of the EAC do not respond to the capacities and requirements of the value chain from paddock to table. There is no question that farming and trading practices need to be upgraded but according to Jensen et.al. (2010), current legal provisions do not leave room for appropriate and gradual improvements (see section 3.2.3).

As shown in the following graph, regulations and standards may have an impact at the farm, sector and national levels, on economic actors, civil society and the public sector, on farmers, traders, processors, consumers, on rural and urban communities, on the overall Gross Domestic Product (GDP).

The impacts may be intended or unintended, expected or unexpected, positive or negative. In a bid to achieving intended positive impacts and avoiding unintended negative impacts the development of regulations and standards (just like other legislative projects) should be guided by an ex-ante Regulatory Impact Assessment or Regulatory Impact Analysis (RIA).
Extending this illustration, the following graph gives an example for areas to be covered by a Regulatory Impact Assessment (RIA) using the case of interventions necessary for controlling Foot and Mouth Disease. It can be distinguished between sector and national level cost-benefit criteria that need to be assessed (upper yellow part on the right side of the graph) and sector and farm level cost-benefit criteria (including market access via traders, processors, including effects on employment and informal trade; lower green part on the right side of the graph).

Several interview partners recommended to implement ex-ante RIA’s (prior to developing and harmonising regulations and standards).
However, it was recognised that it will be challenging to implement such complex analysis without efficient monitoring and evaluation systems in place and quasi no relevant basic data available. Nevertheless, there is a need to use (perhaps simplified) RIAs that will give guidance to the development of new and the continuous revision of existing regulations and standards. As a consequence there is an urgent need to establish monitoring and evaluation systems and databanks (see section 4.4.2).

Graph 7: Cost-benefit criteria to be considered in a Regulatory Impact Analysis: example of Foot and Mouth Disease (FMD)

Co-regulation (public-private partnership for compliance and market surveillance)
As explained in section 3.2, assurance of food safety and quality starts at the farm (including the procurement of safe inputs) and ends on the consumers’ table. Hence, food safety and quality systems have to cover all VC stages and processes ‘from farm to fork’ (see graph 4). As furthermore shown in the same graph, an integrated approach is required involving the operators along the value chain, the legislator and inspection services. The entire system for compliance needs to be embedded into enabling framework conditions and supported by public and private services facilitating VC operators’ compliance and public sector market surveillance. It is obvious that both the private and the public sectors play essential roles for assuring food safety and quality.
Sharing responsibility for food safety and quality in this sense requires clearly defined and coordinated roles to guide appropriate investments into compliance and market surveillance. In a bid to facilitate the emergence of efficient and effective food safety and quality assurance systems from farm to fork and to avoid duplication of efforts of public and private stakeholders, the roles and responsibilities are distributed as follows (also see following graph, which is based on graph 4):

- **self-regulation:**
  VC operators assume primary responsibility for food safety and quality at all stages of the VC (input dealers, farmers, traders, processors)

- **sovereign tasks:**
  the public sector assumes responsibility for market surveillance and conformity assessment supplemented by:
  - public and private support services for:
    - capacity building (e.g. training, consultancy, extension services);
    - compliance verification (e.g. laboratory, certification, accreditation services); and
    - financing (e.g. loan and insurance services, guarantees, subsidies).

Sharing the responsibility for food safety and quality between the public sector (sovereign task) and the private sector (self-regulation) can also be referred to as *co-regulation*.

---

**Graph 8: Co-regulation system for food safety and quality assurance from farm to fork**

- **Input supplies:** Good Manufacturing Practices
- **Production:** Good Agricultural Practices
- **Processing:** Good Manufacturing Practices
- **Trade, Transport, Logistics:** Good Distribution Practices
- **Consumption:** Safe and quality food at affordable prices
- **Laws and regulations:** National policies and embedment into international food safety and quality frameworks, food law, technical regulations standards (food quality aspect), sanitary and phytosanitary regulations standards (food safety aspect), environmental protection, social and labour standards, etc.
- **Market surveillance:** Conformity assessment through risk-based process inspection end-product control (based on sound monitoring partly early warning systems e.g. for food-borne diseases, plant pests and diseases, animal health and zoonotic diseases of livestock, environmental and social issues)
- **Sustainability standards:** addressing economic, social and environmental issues
- **Enabling environment:** Coherent policies, laws and regulations (agriculture, health, trade, industry, economy, labour, local government, finance), Mutual Recognition Agreements (MRA), social infrastructure (e.g. education, health), economic infrastructure (e.g. roads and market places, access to public utilities (e.g. water, power), tax incentives, etc.
- **Public and private services:** Capacity building and organisational development for private and public stakeholders/institutions (e.g. technologies, business management, certification schemes, research, advice and inspection), access to appropriate and affordable inputs and services (e.g. laboratory, certification, inspection, standards information, market access as well as financial services), etc.

*Source: Author’s own*
Having the prevailing conditions in the food sectors in EAC and COMESA countries in mind, it is high time that co-regulation systems gain ground; not only with a view to assure access to the global and to regional markets but as well to improve public health and food security in the domestic and regional markets. Even if it will be a long way to go before necessary policy and institutional reforms, the upgrading of the infrastructure and especially the development of essential capacities will translate into functioning quality assurance systems along (regional) VCs, repeated food incidences as well as the need to facilitate cross-border trade illustrate the urgent need for action.

The current weak performance of the food safety and quality assurance systems in Member States suggests that it would make perfect sense, if they would adopt rules and procedures of co-regulation systems guided by the following principles (Will, 2011, p.128):

- the ‘farm to table approach’,
- the ‘priority of process control over end-product control’,
- the ‘primary responsibility of food operators for food safety’,
- the ‘traceability concept’ and
- the ‘risk-based approach for government control’”

Concluding, even if not explicitly calling their concepts ‘co-regulation systems’, both, EAC and COMESA, have adopted a public-private partnership approach to assuring food safety and quality with the COMESA Green Pass and the EAC SPS Protocol. It is strongly recommended to follow this path both at Member State and regional levels.

An example for sharing responsibilities between the public and the private sectors is the KenyaGAP domestic scope (described in box 13), where tasks are shared between the private Fresh Produce Exporters Association of Kenya, the public Kenya Plant Health Inspectorate Services and the Kenya Bureau of Standards, which accepts KenyaGAP certification as equivalent to the KEBS product quality mark.

4.2.2 Institutional and infrastructure development

The following recommendations focus on upgrading the institutional and infrastructure frameworks necessary for implementing food safety and quality policies and legislation as well as private sector and 3rd party voluntary standards. The proposed measures are meant to be implemented in the short to medium term and cover all five selected value chains. For value chain-specific recommendations for upgrading please refer to sections 3.2.1 to 3.2.5.
National associations and regional federations start to and should even more progressively play an important role for upgrading institutional and infrastructure frameworks in the sub-region. The following federations and associations have already taken the lead in areas relevant to standard development and harmonisation.

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**Box 17: Proposed upgrading strategy: Institutional and infrastructure development**

(for VC-specific recommendations see sections 3.2.1 – 3.2.5)

(based on a rapid assessment; not all-embracing; subject to further research)

<table>
<thead>
<tr>
<th>Proposed measures</th>
<th>Status</th>
<th>VCs</th>
<th>Main actors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish an efficient Quality Infrastructure (QI) in coordination between Member States, REC (e.g. COMESA Green Pass Certification) and African Union (AU), including:</td>
<td>pilot projects</td>
<td>all</td>
<td>AU, RECs, relevant Ministries, Private sector, Laboratories, Centres of Excellence</td>
</tr>
<tr>
<td>• the set up of single national Food Safety Agencies in Member States (example: Tanzania)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• the upgrading and expansion of a network of reference satellite laboratories including accreditation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• the harmonisation of certification and inspection principles and guidelines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• the development of low-cost decentralised solutions for testing close to farmers’ fields (public or private)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• the upgrading and extension of the network of help desks/Centres of Excellence (e.g. Centre of Phytosanitary Excellence COPE)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Set up science-based risk assessment systems for food safety, animal and plant health:</td>
<td>concept papers, pilot projects</td>
<td>cassava, dairy, horticulture, maize</td>
<td>RECs, relevant Ministries, Private sector</td>
</tr>
<tr>
<td>• upgrade public or private monitoring systems/databanks for food safety, animal and plant health (e.g. EAC for animal health, EAGC for aflatoxins/mycotoxins in staple crops)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• establish early warning and surveillance systems for (transboundary) animal and plant pests and diseases (e.g. EAC for TAD, FPEAK for plant pests and diseases)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintain and strengthen NTB Committees, monitoring and enforcement structures</td>
<td>ongoing</td>
<td>all</td>
<td>RECs, relevant Ministries, Private sector</td>
</tr>
<tr>
<td>Upgrade public infrastructure and utilities at border posts necessary for assuring food safety/quality (e.g. storage facilities)</td>
<td>ongoing</td>
<td>all</td>
<td>Public entities</td>
</tr>
<tr>
<td>Support private sector investments into appropriate technologies for quality assurance and decentralised low-cost testing</td>
<td>pilot projects</td>
<td>all</td>
<td>Private sector supported by Public sector</td>
</tr>
</tbody>
</table>

---
nisation, monitoring, mutual recognition and capacity development of VC operators:

- the East African Business Council (EABC):
  - e.g. NTB monitoring, Guide on SPS Measures and Standards;
- the East African Grain Council (EAGC):
  - e.g. EAGC standards, Aflatoxin Monitoring System, Grain Training Institute, Information System;
- the Fresh Produce Exporters Association of Kenya (FPEAK): e.g. KenyaGAP, Practical Training Centre, Early Warning System for Pests and Diseases; and
- the Eastern and Southern African Laboratory Managers Association (ESALAMA): e.g. capacity building for members; laboratory equipment specifications; calibration specifications; harmonisation of methods for sampling, testing and analysis; possible future role in joint procurement of laboratory materials (economies of scale for reducing costs).

The ‘cupping labs’ for coffee in Rwanda explained in the following box may serve as an example for possibilities to establish private sector owned and managed testing close to farmers’ fields. These small-scale decentralised ‘cupping labs’ provide services, which the public central laboratory cannot offer due to the distance to farmers’ fields and to limited human resources capacities.

**Box 18: Case study – Rwanda Coffee ‘Cupping Labs’**

“Our vision is simple: create partnerships that help farmers become self-reliant, pay a fair price for excellent coffee, and develop new models for protecting the environment,” stated Paul Katzeff, co-founder and CEO of Thanksgiving Coffee Company. Teaming up with Timothy Schilling, director of the Partnership to Enhance Agriculture in Rwanda through Linkages (PEARL) project, Katzeff helped develop eleven quality control “cupping labs” to be built throughout Rwanda. Cupping labs give family farmers the tools necessary to improve the quality of the coffee they sell, thereby increasing revenues from an international market hungry for quality. “The cupping labs are the pivotal piece from which all other aspects of quality development get their meaning,” Schilling stated from his office in Butare, Rwanda. “If a producer doesn’t know what his coffee tastes like, how can he make it taste better?” Source: Co-op America’s Business Member, Thanksgiving Coffee, Helping to Rebuild Rwanda through Fair Trade Certified Coffee”. Press release on specialty coffee, April 2004.

To create the cupping laboratories, apart from supplying the necessary equipment, requisites and procedures, Rwandan coffee tasters had to be identified, selected and trained. Experienced professionally certified coffee tasters from the USA agreed to donate their time and come to Rwanda to work with the selected candidates to be trained to run the cupping labs. Extensive instruction and trials took place, until the trainees were able to satisfactorily reproduce the evaluation and grading of their trainers. It took six trainers six weeks to achieve this result.

A quality control system was put in place in order to assure that the level of expertise of the cupping labs be maintained and rechecked on a regular basis.

*Source: Republic of Rwanda (2005, p. 92, verbatim citation)*

### 4.2.3 Human resources development

Building capacities of VC operators, inspectors and staff responsible for standards development, review and updating, researchers and other public and private service providers will be key for implementing food safety and quality assurance systems. The proposed measures are meant to be implemented in the short to medium term and cover all five selected value chains.
**Box 19: Proposed upgrading strategy: Human resources development**

*(for VC-specific recommendations see sections 3.2.1 – 3.2.5)  
(based on a rapid assessment; not all-embracing; subject to further research)*

<table>
<thead>
<tr>
<th>Proposed measures</th>
<th>Status</th>
<th>VCs</th>
<th>Main actors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create awareness on regulations and standards and cost-benefit-‘plus’ of well-managed co-regulation systems</td>
<td>pending</td>
<td>all</td>
<td>all public and private actors</td>
</tr>
<tr>
<td>Develop skills for policy advice (e.g. drafting position papers for participation in standard-setting organisations)</td>
<td>initiated</td>
<td>all</td>
<td>RECs, relevant Ministries, Public-private dialogue</td>
</tr>
</tbody>
</table>
| Up-scale skills development in the public sector, e.g. for:  
  - ex-ante RIA (see 4.2.1)  
  - risk assessment and risk-based food safety control  
  - conformity assessment and certification  
  - monitoring of and early warning systems for pests and diseases  
  - inspectors’ capacities to implement process controls along the entire VC | ongoing; to be intensified | all | RECs, relevant Ministries |
| Up-scale skills development in the private sector (e.g. compliance with regulations; implementation of quality assurance systems along the VC; development of traceability systems; see also 3.2.4 and 3.2.5):  
  - support the set up and strengthening of (public/private) capacity building organisations  
  - develop curricula, guidelines, manuals, practical handouts adapted to capacities and needs of VC operators  
  - implement large-scale capacity building campaigns and assure coaching for translating theory into daily practice | pilot projects | all | Public and private service providers, VC operators |
| Upgrade existing and support the emergence of new public and private services:  
  - build capacities of extension, consultancy and training services (e.g. Agricultural extension, Farmer Field Schools, Practical Training Centres, companies’ embedded service systems)  
  - integrate relevant subjects into curricula for higher education (e.g. food safety at University of Nairobi; food technology)  
  - support business and investment planning for quality assurance systems along VCs and access to appropriate technologies | pilot projects | all | relevant private and public organisations/companies, all Public and private actors |
4.2.4 Networking

Networking is crucial whether among REC Member States, between RECs, with international standard setting organisations, among different ministries and different national entities, between public and private sector stakeholders or within the private sector. The proposed measures are meant to be implemented in the short to medium term and cover all five selected value chains.

<table>
<thead>
<tr>
<th>Proposed measures</th>
<th>Status</th>
<th>VCs</th>
<th>Main actors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participate in and prepare common REC positions for international standard setting platforms</td>
<td>ongoing</td>
<td>all</td>
<td>RECs, Member States</td>
</tr>
<tr>
<td>Advocate for government commitment to harmonising regulations and standards and removing NTBs</td>
<td>ongoing</td>
<td>all</td>
<td>Public and private stakeholders</td>
</tr>
<tr>
<td>Strengthen existing relevant networks, associations, federations as platforms for private-public dialogue and networking between different private sector organisations and among members (e.g. EABC, EAGC, ESALAMA, HCA)</td>
<td>initiated in selected Member States</td>
<td>all</td>
<td>respective networks/associations, RECs, relevant Ministries</td>
</tr>
<tr>
<td>Strengthen consumer organisations and realise consumer information campaigns on food safety and quality (buying and preparation attitudes, safe handling in households)</td>
<td>pilot projects</td>
<td>all</td>
<td>Consumer organisations, RECs, relevant Ministries</td>
</tr>
</tbody>
</table>

**Objectives:**

Harmonised regulatory and standards frameworks for food safety and quality and mutual recognition of standards within EAC and COMESA contribute to promoting regional trade for increased food security of populations living in food deficit areas and for improved (rural) livelihoods of smallholder farmers and small-scale (informal) traders prone to be marginalised in ‘modernised’ agri-business value chains.

**Expected impacts:**

- improved balancing between food surplus and food deficit areas;
• improved public health and consumer protection;
• reduced transaction costs along cross-border value chains;
• improved market access, especially for smallholder farmers and informal small-scale traders; and
• increased incentives for farmers, traders and processors to invest into upgrading VC performance.

Prerequisites:

• implementation of Regulatory Impact Assessments (RIA) to assure Good Regulatory Practices;
• development of co-regulation systems as public-private partnership for food safety and quality assurance;
• identification of a cost-benefit-‘plus’ of compliance as incentive for operators to upgrade their VCs;
• development of an efficient and effective common Quality Infrastructure.

Major challenges:

• adaptation of international standards to the prevailing reality in Eastern and Southern African VCs;
• risk of marginalisation and exclusion of smallholder farmers and (informal) small-scale traders;
• assurance of sustainable financing of public sector market surveillance and private sector compliance; and
• commitment of Member States governments guided by the prospects of long-term benefits of regional integration (and not by short-term national political priorities).

Suggested strategies:

Given the complexity of the task to establishing sustainable systems for public sector market surveillance and private sector compliance with food safety and quality regulations and standards, a holistic approach is required for upgrading:

• the policy framework and legislation (see section 4.2.1);
• the institutional and infrastructure capacities (see section 4.2.2);
• the human resources capacities (see section 4.2.3); and
• the networking capacities (see section 4.2.4).

4.3.2 Using a gradual approach to upgrading
To finally conclude, it is recommended that the following principles guide EAC and COMESA in applying a gradual approach to developing sustainable food safety and quality assurance capacities within their Regional Economic Communities (Keyser and Strychacz, 2010, p.6f):

• recognise the crucial role of the informal market,
  i.e. the informal sector remains the backbone of the industry for the decades to come;
• listen to demand,
  i.e. allow VC operators to respond to market signals and adapt regulations and standards accordingly; and
• improve quality from the bottom up,
  i.e. work on quality improvement by investing in production and trading practices along existing VCs rather than attempting to upgrade the industry to Western standards.
Building sustainable and well-functioning food safety and quality assurance systems along regional value chains will be an essential success factor for increasing food security and unlocking opportunities for pro-poor growth in EAC and COMESA. However, given the current structures and performance of public sector market surveillance and private sector quality assurance systems, it is obvious that a gradual approach is required to cater for the agri-business reality in Eastern and Southern Africa while building efficient and effective cross-border value chains.
# Glossary of relevant terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accreditation</td>
<td>Accreditation is the formal recognition that an organisation is competent to perform specific processes, activities or tasks (which are detailed in a scope of accreditation) in a reliable, credible and accurate manner. Accreditation (provided it is carried out by highly competent people) is the formal tool to provide a high degree of assurance that organisations implementing these processes (activities or tasks) are competent.</td>
</tr>
<tr>
<td>Audit</td>
<td>An audit is a systematic, independent, and documented process for obtaining evidence and evaluating it objectively to determine the extent to which audit criteria are fulfilled.</td>
</tr>
<tr>
<td>Certification</td>
<td>Certification is a procedure by which a third party gives written assurance that a product, process or service conforms to specified requirements.</td>
</tr>
<tr>
<td>Code of Practice (CoP)</td>
<td>Codes of Practice (or guidelines) provide advice and recommendations for implementation (e.g. food hygiene and traceability practices, production practices, sampling and analysis methods). Unlike standards, CoPs are not necessarily formally accepted.</td>
</tr>
<tr>
<td>Competent Authority (CA)</td>
<td>A Competent Authority is the official government agency possessing jurisdiction. It is the authority, which is designated at national level or accepted in third countries as responsible for performing the duties arising from food control requirements.</td>
</tr>
<tr>
<td>Compliance</td>
<td>Compliance is the judgment that a product or service meets the requirements of a specific standard.</td>
</tr>
<tr>
<td>Conformance</td>
<td>Conformance is the defined as a product or process is meeting the required criteria for a given standard.</td>
</tr>
<tr>
<td>Conformity assessment</td>
<td>Conformity assessment is any procedure used, directly or indirectly, to determine that relevant requirements in technical regulations or standards are fulfilled. Conformity assessment procedures include testing, certification, inspection and accreditation.</td>
</tr>
<tr>
<td>Control (Food control)</td>
<td>According to the Food and Agriculture Organization of the United Nations (FAO), food control is a mandatory regulatory activity of enforcement by national or local authorities to provide consumer protection and ensure that all foods during production, handling, storage, processing, and distribution are safe, wholesome and fit for human consumption; conform to safety and quality requirements; and are honestly and accurately labelled as prescribed by law.</td>
</tr>
<tr>
<td>Co-regulation</td>
<td>Co-regulation can be defined as sharing the responsibility for food safety and quality between the public sector (sovereign task of market surveillance) and the private sector (self-regulation for compliance).</td>
</tr>
<tr>
<td>Due diligence</td>
<td>Due diligence is defined as the (due) care (precaution, verification) exercised by a value chain operator (or other entity) to avoid harm to another party or their property. Failure to make this effort is considered negligence.</td>
</tr>
<tr>
<td>Enforcement</td>
<td>Enforcement refers to approaches responding to non-compliance and sanctions to withdraw recognition if corrective action is not taken. The regulator or standard setter has to have procedures for responding to the results of the conformity assessment, either by invoking corrective action or withdrawing the recognition of the organisation or operator as conforming to the regulation or standard.</td>
</tr>
<tr>
<td><strong>Environmental standards</strong></td>
<td>Environmental standards focus on the management and conservation of the natural resource base (soil, water, air, plant and animal genetic resources, etc.); in a sustainable manner to ensure the attainment and continued satisfaction of human needs for present and future generations.</td>
</tr>
<tr>
<td><strong>Equivalence</strong></td>
<td>Equivalence is the acceptance that regulations or standards different from provisions of the regulator or standard setter fulfil the same objectives, albeit by different means. For example, recognition of equivalence of sanitary and phytosanitary measures does not require sameness of measures, but the acceptance of alternative measures that meet an importing country’s appropriate level of sanitary and phytosanitary protection.</td>
</tr>
<tr>
<td><strong>Food safety and quality</strong></td>
<td>According to the Food and Agriculture Organization of the United Nations (FAO), the terms food safety and food quality can sometimes be confusing. Food safety refers to all those hazards, whether chronic or acute, that may make food injurious to the health of the consumer. It is not negotiable. Quality includes all other attributes that influence a product’s value to the consumer. This includes negative attributes such as spoilage, contamination with filth, discoloration, off-odours and positive attributes such as the origin, colour, flavour, texture and processing method of the food.</td>
</tr>
<tr>
<td><strong>Geographical Indication</strong></td>
<td>Geographical indications (GIs) are a form of intellectual property. They identify a good as originating in the territory of a particular country, or a region or locality in a country, where a given quality, reputation or other characteristic of the good is essentially attributable to the physical place of origin. In simple terms, GIs are the names given to traditional products produced according to traditional methods in a particular place.</td>
</tr>
<tr>
<td><strong>Harmonisation</strong></td>
<td>Harmonisation is a process, by which regulations or standards on the same subject (including requirements for conformity assessment), which are approved by different standardising bodies, establishes interchangeability of products, processes and services, or mutual understanding of test results or information provided according to these standards.</td>
</tr>
<tr>
<td><strong>Help desk</strong></td>
<td>Help desks in the context of regulations and standards offer information services on specific issues, such as Sanitary and Phytosanitary Measures (SPS), Technical Barriers to Trade (TBT) or registered pesticides or the like. Help desks may be established within governmental or parastatal institutions, within private sector self-help organisations (federations, associations) or within companies (e.g. consulting companies).</td>
</tr>
<tr>
<td><strong>Horizontal regulations and standards</strong></td>
<td>Horizontal regulations and standards refer to rules across the food chain encompassing all aspects ranging from farm to fork, which are common to all foodstuffs (such as food hygiene, labelling, food and feed control, contaminants, etc.).</td>
</tr>
<tr>
<td><strong>Inspection</strong></td>
<td>The conformity evaluation by observation and judgement accompanied as appropriate by measurement, testing, or gauging.</td>
</tr>
<tr>
<td><strong>Mandatory</strong></td>
<td>see (i) Regulation and (ii) Technical Barriers to Trade</td>
</tr>
<tr>
<td><strong>Market surveillance</strong></td>
<td>Market surveillance refers to activities carried out and measures taken by public authorities to ensure that products are in compliance with legal requirements set out in the relevant (national, regional) regulations and standards or do not endanger health, safety or other issues of public interest protection.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Mutual Recognition Agreement (MRA)</td>
<td>Mutual Recognition Agreements are meant to facilitate trade. Exporting and importing countries may enter into Mutual Recognition Agreements (MRA), thus formally recognising that the inspection and certification system of one country is equivalent to that of the partner country. Recognising that the certification system provides the same level of protection, controls in the importing country can be reduced.</td>
</tr>
<tr>
<td>Non-Tariff Barriers (NTB)</td>
<td>Non-Tariff Barriers are restrictions and limitations acting as obstacles to trade, appearing as rules, regulations or laws that have a negative impact on trade.</td>
</tr>
<tr>
<td>Non-Tariff Measures (NTM)</td>
<td>Non-Tariff Measures are policy measures, other than ordinary customs tariffs, that can potentially have an economic effect on international trade in goods, changing quantities traded, or prices or both. Some of these measures may constitute non-tariff barriers.</td>
</tr>
<tr>
<td>Private voluntary standards</td>
<td>Private trade and industry standards are developed by individual firms (corporate standards) or by networks and business associations (collective standards, usually pre-competitive); examples: GlobalGAP, KenyaGAP, Tesco Nature's Choice, Ethiopian Horticulture Producers and Exporters Association (EHPEA) Code of Practice for Sustainable Flower Production, etc.</td>
</tr>
<tr>
<td>Quality</td>
<td>Quality is a measure of excellence or the degree to which a set of inherent characteristics fulfils requirements (i.e. free from defects, deficiencies and significant variations from the requirements set in the quality standard).</td>
</tr>
<tr>
<td>Quality Assurance (QA)</td>
<td>Quality Assurance is the part of quality management focused on providing confidence that quality requirements will be fulfilled.</td>
</tr>
<tr>
<td>Quality control</td>
<td>Quality control is the part of quality management focused on implementing all necessary measures aimed at fulfilling stated quality requirements.</td>
</tr>
<tr>
<td>Quality Infrastructure (QI)</td>
<td>Quality Infrastructure (QI) refers to all aspects of metrology, standardization, testing, and quality management including certification and accreditation. This includes both public and private institutions and the regulatory protocol within which they operate.</td>
</tr>
<tr>
<td>Quality Management System (QMS)</td>
<td>Quality Management System refers to the coordinated activities to direct and control an organization with regard to quality.</td>
</tr>
<tr>
<td>Regulation</td>
<td>Regulations are documents which lay down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory. The difference between technical regulations and standards is that the former are mandatory while the latter are not.</td>
</tr>
<tr>
<td>Regulatory Impact Analysis or Assessments (RIA)</td>
<td>Regulatory Impact Analysis (RIA) is a systemic approach to critically assessing the positive and negative effects of proposed and existing regulations and non-regulatory alternatives. At its core it is an important element of an evidence-based approach to policy making. The conduct of RIA within an appropriate systematic framework can underpin the capacity of governments to ensure that regulations are efficient and effective.</td>
</tr>
<tr>
<td>Risk assessment</td>
<td>Risk assessment refers to the scientific evaluation of known or potential adverse health effects resulting from human exposure to food-borne hazards. The risk assessment process provides an estimate of the probability and severity of illnesses attributable to a particular hazard related to food.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
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</tr>
<tr>
<td><strong>Standards</strong></td>
<td>Standards are documents established by consensus and approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods. Standards are voluntary by nature. However, multilateral and regional standards are voluntary but may either serve as benchmarks for national (mandatory) regulations or for national (voluntary) standards respectively.</td>
</tr>
<tr>
<td><strong>Safety</strong></td>
<td>Safety of a product refers to the freedom from environmental and other contaminants and sources of toxicity (physical, chemical and/or biological) injurious to health. Specific concerns about food hazards have usually focused on: microbiological hazards, pesticide residues, misuse of food additives, chemical contaminants, including biological toxins; and adulteration.</td>
</tr>
<tr>
<td><strong>Sanitary and Phytosanitary Measures (SPS)</strong></td>
<td>Sanitary and Phytosanitary Measures (SPS) refer to (i) the protection of human or animal health against risks in food or feed; (ii) the protection of human, animal or plant health against risks from pests or diseases of plants or animals; and (iii) the protection of the territory of a country against other damage from the entry, establishment or spread of pests. SPS can be seen as a subcategory of technical regulations since they may also take the form of regulations or standards, laying down product-related requirements.</td>
</tr>
<tr>
<td><strong>Soft law</strong></td>
<td>The term soft law refers to quasi-legal instruments which do not have any binding force, or whose binding force is somewhat ‘weaker’ than the binding force of traditional law, often referred to as ‘hard law’, in this context.</td>
</tr>
<tr>
<td><strong>Technical regulations and standards</strong></td>
<td>Technical regulations and standards are documents which lay down substantive requirements relating to product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory (regulations) or voluntary (standards). They may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production methods.</td>
</tr>
<tr>
<td><strong>Traceability</strong></td>
<td>Traceability is the ability to trace and track a food, feed, food-producing animal or substance through all stages of production and distribution (including import, from and including the primary production of food, up to and including sale or supply to the final consumer and, where relevant to food safety, the production, manufacture and distribution of feed).</td>
</tr>
<tr>
<td><strong>Validation</strong></td>
<td>Validation is the confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled.</td>
</tr>
<tr>
<td><strong>Verification</strong></td>
<td>Verification refers to the confirmation, through the provision of objective evidence, that specified requirements have been fulfilled.</td>
</tr>
<tr>
<td><strong>Vertical regulations and standards</strong></td>
<td>Vertical regulations and standards are provisions applicable to specified products or product groups (such as fresh fruit and vegetables, frozen fruit and vegetables, fruit juices, wine, honey, edible oil, chocolate, meat, fish, etc.).</td>
</tr>
<tr>
<td><strong>Voluntary standards</strong></td>
<td><strong>Voluntary standards can be set by (i) public authorities (e.g. ISO standards recognised by the WTO or marketing grades) or (ii) value chain stakeholders represented in business associations or civil society represented in NGOs (e.g. GlobalGAP, organic or Fair-trade) or (iii) individual companies (e.g. Tesco’s Nature’s Choice, Marks and Spencer’s Field-to-Fork). Although voluntary standards are not mandatory by rule, some of them have become de facto mandatory, since they are required when producers compete for market shares. Observance of voluntary standards also becomes increasingly a prerequisite for establishing long term supplier-customer relationships.</strong></td>
</tr>
</tbody>
</table>

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Useful Links

COMESA – SPS Regulations
http://famis.comesa.int/content/page/76/76/sps/lang.en/COMESA-SPS-Regulations.html

COMESA, EAC and SADC – Non-Tariff Barriers
http://www.tradebarriers.org

COMESA – Cross Border Trade Desk at COMESA funded by EU
http://www.cbtcomesa.com/

EAC – Quality Infrastructure in the East African Community
http://www.eac-quality.net/

EABC – SPS in the East African Community
# Annex

List of persons interviewed

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lusaka/ Zambia, 9-10 May 2011</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sam G. Kanyarukiga (Ph.D.)</td>
<td>COMESA</td>
<td>Senior Agricultural Advisor/ CAADP Coordinator</td>
</tr>
<tr>
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<tr>
<td>Nalishebo Mbeleo</td>
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</tr>
<tr>
<td>Dr. Bruce Mukanda</td>
<td>AU-IBAR</td>
<td>Senior Programmes and Projects Officer</td>
</tr>
<tr>
<td>Eberhard Goll</td>
<td>GIZ Lusaka Office</td>
<td>Programme Manager</td>
</tr>
<tr>
<td><strong>Nairobi/ Kenya, 11-16 May 2011</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evah Oduor</td>
<td>Kenya Bureau of Standards (KEBS)</td>
<td>Director Standards Development and International Trade</td>
</tr>
<tr>
<td>Samuel Onjolo Omolo</td>
<td>Kenya Bureau of Standards (KEBS)</td>
<td>Agricultural Standards Officer</td>
</tr>
<tr>
<td>Phyllis Nganga</td>
<td>Kenya Co-operative Coffee Exporters (KCCE Ltd.)</td>
<td>Quality Assurance Manager (Trading Liquorer)</td>
</tr>
<tr>
<td>Thomas Barasa (Ph.D.)</td>
<td>ex-COMESA AMRIP</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Joseph Kamau (Ph.D.)</td>
<td>Kenya Agricultural Research Institute (KARI)</td>
<td>(Cassava)</td>
</tr>
<tr>
<td>Francis Wario</td>
<td>Fresh Produce Exporters Association of Kenya (FPEAK)</td>
<td>Standards Specialist/ KenyaGAP Coordinator</td>
</tr>
<tr>
<td>Christian Hagemann</td>
<td>GIZ – Eco Mark Africa</td>
<td>Project Advisor</td>
</tr>
<tr>
<td>Andrew Edewa</td>
<td>UNIDO</td>
<td>National Project Coordinator/ Trade Capacity Building</td>
</tr>
<tr>
<td>Allan Azegele (Ph.D.)</td>
<td>Department of Veterinary Services</td>
<td>(Dairy)</td>
</tr>
<tr>
<td>Kevin Kabui (Ph.D.)</td>
<td>University of Nairobi</td>
<td>(Dairy)</td>
</tr>
<tr>
<td>Joan Otian</td>
<td>Directorate of Livestock Production</td>
<td>(Dairy)</td>
</tr>
<tr>
<td>Joyce Thaiya (Ph.D.)</td>
<td>Ministry of Livestock Development/ GIZ PSDA</td>
<td>(Dairy)</td>
</tr>
<tr>
<td>Holger Marbach</td>
<td>Vital Camel Milk Ltd.</td>
<td>(Dairy)</td>
</tr>
<tr>
<td>Gerald Makau Masila</td>
<td>East African Grain Council (EAGC)</td>
<td>Executive Director</td>
</tr>
<tr>
<td>Samwel Rutto</td>
<td>East African Grain Council (EAGC)</td>
<td>Program Co-ordinator, Structured Trading System (STS)</td>
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<tr>
<td>Jackson T. Kiraka</td>
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<td>Marketing Information &amp; Communications Officer</td>
</tr>
<tr>
<td>Steve Collins</td>
<td>ACDI/ VOCA Kenya Maize Development Programme II</td>
<td>Chief of Party</td>
</tr>
<tr>
<td>Name</td>
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<td><strong>Nairobi/ Kenya, 11-16 May 2011</strong></td>
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<tr>
<td>Stanley Guantai</td>
<td>ACDI/VOCA Kenya Maize Development Programme II</td>
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<td>Kenya Small Scale Cereal Growers Association</td>
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</tr>
<tr>
<td><strong>Arusha/ Tanzania, 17-18 May 2011</strong></td>
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<tr>
<td>Moses Marwa</td>
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<td>Principal Agricultural Economist</td>
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<td>Nduati Wa Karanja</td>
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<td>Timothy E.O. Wesonga</td>
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<td>Adrian Njau</td>
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<tr>
<td>Miriam Heidtmann</td>
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<td>Deputy Head of Programme &amp; Organizational Dev. Officer</td>
</tr>
<tr>
<td><strong>Addis Ababa/ Ethiopia, 19-20 May 2011</strong></td>
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<tr>
<td>Frank Ebinger</td>
<td>GIZ Engineering Capacity Building Program (ECBP)</td>
<td>Manager Quality Infrastructure Component</td>
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<tr>
<td>Nigussie G/Mariam</td>
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<tr>
<td>Elias Bebe</td>
<td>GIZ Engineering Capacity Building Program (ECBP)</td>
<td>Agro Expert</td>
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<tr>
<td>Woinishet Bekele</td>
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<tr>
<td>Tarekegn Berhanu (Ph.D.)</td>
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<td>Residue Analyst/Specialist</td>
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<tr>
<td>Ato Bekele Dinku</td>
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<td>Residue Chemist</td>
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<tr>
<td>Andrew Williams</td>
<td>GIZ Engineering Capacity Building Program (ECBP)</td>
<td>Co-Director Ethiopian Standards Agency</td>
</tr>
<tr>
<td>Klaus Ehret</td>
<td>GIZ Engineering Capacity Building Program (ECBP)</td>
<td>International Director Ethiopian Conformity Assessment Enterpr.</td>
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<tr>
<td>Ayele Degefa</td>
<td>Ethiopian Conformity Assessment Enterprise (ECAE)</td>
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<tr>
<td>Muhiye Endrie</td>
<td>Ethiopian Conformity Assessment Enterprise (ECAE)</td>
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<tr>
<td>Semachew Kassahun</td>
<td>USAID Feed the Future Initiative</td>
<td>Coordinator</td>
</tr>
<tr>
<td>Wondwosen Asfaw</td>
<td>Ethiopian SPS and Livestock &amp; Meat Marketing Program</td>
<td>Senior Veterinary Epidemiologist</td>
</tr>
<tr>
<td>Yirgalem Gebremeskel (Ph.D.)</td>
<td>USAID</td>
<td>Livestock &amp; Dairy Program Management Specialist</td>
</tr>
<tr>
<td>Merritt Chesley</td>
<td>United States Department of Agriculture (USDA)</td>
<td>Agricultural Counselor/ Foreign Agricultural Service</td>
</tr>
<tr>
<td>Yeshewalul Deresse</td>
<td>Gakki International Consultant PLC</td>
<td>Managing Director, certified auditor/ certification consultant</td>
</tr>
<tr>
<td>Ghidey Gebremedhin</td>
<td>Ethiopian Meat and Dairy Technology Institute (EMDTI)</td>
<td>Director General</td>
</tr>
<tr>
<td>Jürgen Greiling (Ph.D.)</td>
<td>SNV Support to Business Organizations (BOAM)</td>
<td>Senior Advisor Agroprocessing</td>
</tr>
</tbody>
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