

NON-TARIFF MEASURES ON GOODS TRADE IN THE EAST AFRICAN COMMUNITY

Assessment of Regional Dairy Trade

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Abbreviations and Acronyms

AfDB	African Development Bank
AI	Artificial Insemination
COMESA	Common Market of East and Southern Africa
COMSTAT	COMESA STATistical database
cfu	colony forming units
DDA	Dairy Development Authority (Uganda)
DfID	Department for International Development (UK)
EAC	East African Community
EADD	East Africa Dairy Development project
ESADA	East and Southern Africa Dairy Association
EU	European Union
EADRAC	East African Dairy Regulatory Authorities Council
FAO	United Nations Food and Agricultural Organization
FAOSTAT	FAO STATistical database
HACCP	Hazard Analysis and Critical Control Points
IDF	Import Declaration Form
IFAD	International Fund for Agricultural Development
IMF	International Monetary Fund
ILRI	International Livestock Research Institute
IQAM	Improving Quality Assurance in Milk Markets project
ISO	International Standardization Organization
ITC	International Trade Center
KDB	Kenya Dairy Board
KDPA	Kenya Dairy Processors Association
KEBS	Kenya Bureau of Standards
KRA	Kenya Revenue Authority
MAST	Multi-Agency Support Team
ml	milliliter
NGO	Non-Governmental Organization
NTB	Non-Tariff Barrier
NTM	Non-Tariff Measure
OECD	Organization for Economic Co-operation and Development
PADEBL	Dairy Cattle Support Project
RARDA	Rwanda Animal Resources Development Authorities
RATES	Regional Agricultural Trade Expansion Support Program
RBS	Rwanda Bureau of Standards
RIA	Regulatory Impact Assessment
SDP	Smallholder Dairy Project
SPS	Sanitary and Phytosanitary
TBT	Technical Barriers to Trade
TDA	Tanzania Dairy Authority
TFDA	Tanzania Food and Drugs Authority
UHT	Ultra Heat Treated
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organization
UNBS	Uganda National Bureau of Standards
USAID	United States Agency for International Development
USD	United States Dollars
WTO	World Trade Organization

Executive summary

i. The EAC has focused on the removal of non-tariff barriers in an attempt to avoid a policy reversal after the Partner States courageously have removed tariffs on intra-regional trade. Policy makers are well aware that protectionist interests still exist and will seek new outlets. They fear that tariffs will be replaced by less transparent trade barriers such as administrative procedures, sanitary and phytosanitary measures, and technical barriers to trade. The EAC Partner States have committed themselves to work towards the elimination of Non-Tariff Barriers (NTBs) to trade between them. The Partner States are to design a mechanism that identifies and monitors NTBs and have committed themselves to eliminating existing barriers on intra-EAC trade and to avoid erecting new ones.

ii. Recent work by the World Bank and local business associations has identified numerous sources of trade barriers with a root in NTB. The present work analyzes NTBs in the dairy sector. The report deviates from the more aggregate work that has recently been done. The report fails to find support for the belief that NTBs are a big threat to regional trade currently. The consultants found that market participants were generally happy with the flow of trade. But there are numerous potential sources of NTBs that may develop into major barriers in the future.

iii. Less than 1% of the EAC region's milk output is exported. Some observers have tended to link the poor trade performance with the existence of trade barriers. It is more likely that trade is not happening due to a general shortage of milk. Dairying in all five countries is a domestically focused activity with very large informal sectors and maybe only 10-20% of milk going through formal market chains. The reliance on the domestic market is an optimal solution to the production and marketing challenges and opportunities faced by the sector. Consumer demand is highly skewed towards low price raw milk that is generally boiled before consumption. Raw milk is not a tradable product due to tropical temperatures and the lack of cooling infrastructure. Trade primarily takes place in milk powder, UHT milk and luxury products such as cheese and yoghurt. The potential for intra-regional trade in these products is still in its infancy as seasonal variation is similar across EAC Partner States and all are normally in a deficit situation. The trade in luxury goods is restricted by the limited size of the middle income class, expatriate societies and the tourism industry.

iv. Dairy trade, however, grew strongly during the decade prior to 2008. Total value of exports is USD 55.5 million. Kenya is by far the region's strongest dairy producer and exporters and is responsible for 86% of the total. The ranking after Kenya is Uganda (9%), Tanzania (4%), Rwanda (1%) and Burundi (0.3%). The majority of private market actors interviewed stated that they did not experience major problems with non-tariff barriers. A sizeable portion of these said that trade had become much easier over the latest years. Trade remains burdened by frictional costs which traders consider an unnecessary nuisance although the aggregate costs of these were generally believed to be small. Policy work must therefore be focused on future developments and the need to keep markets open to allow for a more dynamic trade-oriented dairy sector to emerge.

v. EAC dairy standards have recently been upgrade very ambitiously and harmonized with international standards. This has taken place without a clearly defined demand from the private sector and without reference to a public health rationale. Instead the upgrading and harmonization process have been donor and public agency-driven.

vi. The new standards may be a source of trade conflicts in the future. The standards are unrealistic. The microbiological levels are set at a level which are at present unreachable for nearly the entire EAC industry. The trade aspects may be serious: in the future, most EAC dairy products can be denied entry with reference to the harmonized EAC standards. Furthermore, the infrastructure necessary to prove compliance is not in place. Given that production and domestic and regional trade is likely to continue unaffected by the new standards, this means that authorities will be forced to issue documents stating that the products comply with trading requirements even when they do not. This jeopardized the trust to the regulatory system.

vii. Other areas of concern exist too. The EAC has agreed that each country's national quality seal should be accepted as sufficient and routine proof of conformity with regional standards. National bureaus of standards nevertheless still demand additional testing. Market participants also complain that veterinary licenses have to be issued for each individual consignment. For established firms, it would make more sense to issue such licenses for an extended period of time like annually. This will both benefit trade and free up resources from monitoring traders with a good reputation.

Recommendations

viii. The newly created East African Dairy Regulatory Authorities Council (EADRAC), which includes representatives from dairy authorities in all Partner States, is well positioned to take the lead in removing a large number of obstacles of a red tape nature. Many issues will require the collaboration of other agencies in the five Partner States, but the dairy authorities have the necessary overview and the technical knowledge to coordinate efforts. The EADRAC could focus on implementing the already agreed principle of mutual recognition of quality marks. The licensing system should also be reviewed and discussed. A system based on annual licenses would be a good idea. The licensing system could also be made electronic or internet-based. The actual value of the current system is mainly for registration purposes which could be fulfilled by an electronic system.

ix. The newly harmonized EAC dairy standards should be reviewed according with the recommendation already given in the World Bank (2008) report. If a review demonstrates that the standards do not meet public health or market demands they should be withdrawn. If a public health and/or market demand is established for another set of standards these could be developed with the assistance of donors and international organizations. FAO and the WHO could be consulted on the development of a standard for the unique product of the region: raw milk destined to be boiled before consumption. The implementation and conformity assessment procedures should be in accordance with the realities in the EAC region.

x. The policy process that led to the adoption of the harmonized EAC standards needs to be improved. EAC Partner States face many new demands for regulations such as food safety, animal health, and environmental protection. It is important that new issues are addressed in ways in line with the needs and capacities of the EAC region. EAC Partner States and the donors that support them should avoid importing policy measures designed for OECD countries without adjusting them to the realities in East Africa.

xi. South-South cooperation should be encouraged. The study of policy interventions in EAC dairying has revealed attempts to learn from some of the most advanced dairying

industries of the world such as the US one. The value of this is doubtful. Many Southern countries have dairy industries that operate better than the EAC one and under more similar conditions regarding production, trade, processing and consumption. India, for instance, has achieved phenomenal growth in dairy while relying on smallholders. There are many lessons to be learned from such experiences.

I. INTRODUCTION

1. The present East African Community (EAC) was established in 2000 by Kenya, Uganda, and Tanzania. Rwanda and Burundi joined in 2007 (see Box 1). The EAC has grown into one of the most dynamic regional agreements on the African continent. The EAC has removed all tariffs on trade between the Partner States of Kenya, Uganda, Tanzania, Burundi and Rwanda on 1st of January this year. This marks a strong drive towards a more efficient, market driven economy. The EAC is committed to this drive and well aware that enjoying the benefits of trade requires long term commitment. The welcoming attitude to free trade can only be sustained in a context of meaningful market access. Both Scholars and practitioners fear that the world wide tendency to falling tariffs will be counteracted by a policy reversal where less transparent trade barriers will take the place of falling tariffs. The EAC has met this fear by including binding commitments for the Partner States to work towards the elimination of Non-Tariff Measures (NTMs) between them. The Partner states are to design a mechanism that identifies and monitors NTMs and commit themselves to eliminating existing barriers on intra-EAC trade.

2. This report investigates the use of NTMs in the dairy sector. The report represent follow up work to a much broader and larger general study on NTMs in the EAC undertaken by the World Bank in 2007 and 2008 (World Bank 2008). Dairy was chosen to get a detailed picture of the NTM situation using a sector that due to the perishability of its products would be particularly prone to NTMs.

3. Trade Barriers are an incredibly difficult analytical, as well as policy, area. Beyond traditional barriers such as tariffs, there are no databases that may inform policy makers about the gravity of the problem and where it is located. The diversity of potential barriers is extreme. This uncertainty makes NTMs the perfect place to look for protectionist interests wanting an edge in the domestic market.

4. Protectionist interests are not alone in creating trade barriers. The many new regulatory areas that EAC authorities will have to deal with as international integration continues may create trade barriers by mistake rather than design. Food safety regulation, for instance, is a new topic which may be badly designed or implemented due to capacity problems rather than bad intentions.

5. In this report, we will present a case study of the EAC dairy industry, that both illustrate how protectionist interests may operate in the EAC political economy and how new regulatory areas create problems for the authorities and the private sector alike. In Section II we will discuss the nature of NTMs, how they are defined and classified, and which

Box 1: Key dates in the EAC.

1967: EAC first established

1977: EAC dissolved

November 30, 1993: Signing of Agreement for the Establishment of the Permanent Tripartite Commission for East African Co-operation

March 14, 1996: Secretariat of the Permanent Tripartite Commission launched, full co-operation operations begin

November 30, 1999: Treaty for the Establishment of the East African Community signed

July 7, 2000: Treaty for the Establishment of the East African Community enters into force

June 18, 2007: The Republic of Rwanda and the Republic of Burundi accede to the EAC Treaty

approaches are used to policy work in this field. Section III presents an overview of the EAC dairy industry and regional and extra-regional trade. In Section IV, presents the evidence of trading requirements in the EAC dairy value chain found during fieldwork in Rwanda, Uganda and Kenya. Section V discusses policy and project interventions in East African dairy. Section VI focuses on one particular recent intervention: the process of upgrading and harmonizing EAC dairy standards with international ones. Conclusions and recommendations are offered in Section VII.

II. THE NATURE OF NON-TARIFF MEASURES

Definition and Classification of Non-Tariff Measures

6. The EAC's working definition of NTMs is "*quantitative restrictions and specific limitations that act as obstacles to trade*" (World Bank 2008: iii). Similar definitions are used in the work of other organizations and in the academic literature. NTM definitions are generally residually defined: any trade barrier that is not a tariff is a non-tariff barrier. This creates two problems: (i) the rationale for trade barriers is not discussed; and (ii) the number of NTMs becomes very high and their nature diverse.

7. NTMs may serve legitimate social objectives or they may be instruments of protectionism. These two options may even be mixed as a NTM may be designed to serve a legitimate objective, but vested interest may influence to policy process to affect either the design or the implementation of the NTM to their advantage. Import quotas function much like tariffs and are an example of an illegitimate NTM. Food safety standards are an example of a potentially legitimate NTM. The standards are set to safeguard public health and if that is their true function they are legitimate. They may, however, be misused, for instance, by requiring costly test procedures for imports. In that case, they are illegitimate and should be either removed or redesigned or be implemented in a non-discriminatory way.

8. We need to distinguish between good and bad NTMs. In this report, we use the EAC definition of NTMs. We also define Non-Trade Barriers (NTBs) as illegitimate NTMs. NTBs are a subset of NTMs. Trade policy should identify which NTMs are NTBs and remove the NTBs while keeping in place legitimate NTMs. We now need to define the concept of legitimacy. This can be done either by focusing on the trade effects or on the general economic effects of NTMs.

9. Part of the literature is focused exclusively on trade and measure the impact of NTBs as trade foregone (Otsuki et al. 2001). In this strand of analysis a NTM is a NTB if another measure exist that is *less trade restrictive* but which fulfill the same policy objective. Another part of the literature identify NTBs as NTMs for which another measure exist that is more *economic efficient* and fulfill the same policy objective (van Tongeren, Beghin and Marette 2009). The first school of thought focuses on trade impacts, the other on general economic efficiency. Both lines of thinking acknowledge the existence of legitimate NTMs but they differ in the degree to which trade is sacrificed to meet the given policy objective.

10. From a perspective of welfare, NTBs should be defined on the basis of economic efficiency. The difference between the two definitions is illustrated by an example. A food safety standard is designed to stop food imports of inferior quality. The trade-oriented definition is focused on maximizing trade, while the economic efficiency definition allows

the standard to trade off some amount of trade for higher general economic gains. The trade-oriented definition may, however, be easier to operationalize in some types of studies.

Trade policy work typically identifies NTMs by cataloging them and subsequently analyzes their trade and economic effects in order to identify the NTBs among them. A recent high profile attempt to advance work on NTMs has led to a new classification system as can be seen in box 2. Notably, the system includes procedural obstacles that relate to the implementation of a measure rather than its design. Box 2 presents the main categories and

Box 2: MAST group NTM classification system

The director general of UNCTAD and the WTO has asked a group of eminent persons to advance work on non-tariff barriers. A Multi-Agency Support Team¹ (MAST) provides the technical work and has developed a new classification system. The system is purely descriptive and is not an analytical scheme and has no prior assumptions about the effects of these policies. The MAST list includes procedural obstacles that relate to the implementation of measures, not the measures themselves. The list illustrates what kind of policy measures that may fall into the NTM category:

- A. Sanitary and phytosanitary measures
- B. Technical barriers to trade
- C. Other technical measures
- D. Price control measures
- E. Quantity control measures
- F. Para-tariff measures
- G. Finance measures
- H. Anti-competitive measures
- I. Export related measures
- J. Trade related investment measures
- K. Distribution restrictions
- L. Restriction on post-sales services
- M. Subsidies
- N. Government procurement restrictions
- O. Intellectual property
- P. Rules of origin

The main headings of the classification of procedural obstacles are:

- Arbitrariness or inconsistency
- Discriminatory behavior favoring specific producers or suppliers
- Inefficiency or obstruction
- Non-transparency
- Legal issues
- Unusually high fees or charges (*e.g.* for stamp, testing or other services rendered)

This list only includes the main categories. See appendix 1 for a disaggregation of these.

¹ Members of MAST include: Food and Agricultural Organization of the United Nations (FAO), International Monetary Fund (IMF), International Trade Centre (ITC), Organization for Economic Cooperation and Development (OECD), United Nations Conference on Trade and Development (UNCTAD), United Nations Industrial Development Organization (UNIDO), the World Bank, and the World Trade Organization (WTO).

the individual components of each category are available in appendix 1. The list of NTMs is very long. Many of the NTMs may have a legitimate objective, but as a NTM may be used as a NTB by manipulating its implementation, any NTM may in principle be used as a NTB. The diversity and number of NTBs call for focus in trade policy work.

11. The MAST list illustrates the proliferation of policies that affect trade. Increased international integration has introduced new regulatory areas in developing countries. Examples are worker safety regulation, food safety, and technical requirements. Both exporters and domestic producers in developing countries are affected. Exporters are confronted with new demands in these and other areas. Constituencies within developing countries begin to demand the benefits of such regulations. Developing country policy makers are challenged by a mismatch between the demand and supply of new regulations: new foreign and domestic demands push up the demand for regulations but on the supply side the policy makers rely on regulations developed for different contexts than the ones in which they themselves live. Food safety standards are generally set by developed countries. The incomes and preferences are different in developing countries as are the capacity to implement and enforce food safety legislation. This mismatch increases the risks of bad regulation. Low quality regulation may be a source of NTBs.

Relevance to the EAC

12. EAC trade policy work follows the international trend to include non-tariff measures. The inspiration comes partly from domestic pressure to open up regional trade and partly from donors and extra-regional trading partners pushing for trade liberalization. The global trend towards international integration strongly affects the EAC region. However the emphasis is different in the EAC Partner States than in many other regions in the world. EAC countries mainly trade agricultural commodities and light manufactures, while international trade is generally done in a much wider range of products. The political institutions and technologies underpinning trade is therefore radically different elsewhere.

13. The analytical methods and policy formulas used are basically imported from OECD countries. Given the heavy dominance of a handful of countries in the development of thinking on NTMs, there is a risk East Africa imports inappropriate analytical methods and policy approaches. The emphasis may also differ across countries. For instance, the literature developed on anti-dumping is very large. Anti-dumping measures are NTBs of high importance in OECD countries and some larger middle income countries, yet no African country except South Africa has brought an anti-dumping case against an OECD country, despite the widespread dumping of agricultural products on African markets as a byproduct of domestic OECD support regimes (Mold 2005). Anti-dumping is globally very important, yet irrelevant in the EAC.

14. The EAC must carefully consider its own capacities and needs when analyzing NTMs. East African political economy is different from the OECD country situation, the regulatory capacities are different, and donors play a much larger role than in most other places outside of Africa. The business sector works differently too. The East African value chains are short and have to operate in highly volatile economic environments. The East African businessmen have to deal with climatic and political uncertainties while they cater to the East African consumer with different incomes and tastes than the OECD one.

15. International integration has introduced new regulatory areas, but offered few regulatory instruments tailor-made to the EAC context. NTBs will arise from new regulations deliberately or due to the lack of experience with these new areas. Future policy initiatives and donor interventions must beware of the specificities of the EAC context. One-size-fits all approaches should be avoided by the modification of imported solutions to fit local circumstances.

Policy Approaches

16. The discussion of definition and classification gives us a conceptual framework that can be used to work on the identification and removal of NTBs. However, the information problems in the study of NTBs are immense. We have no databases of the importance of NTBs like tariff data. We have no simple ways to study and compare the impacts of NTBs. Trade-related measures tend to be technical in nature and their understanding dependent on technical and country and sector-specific knowledge. In short, NTBs are tough work.

17. NTMs have been analyzed from different angles and using different units of analysis. Here we will evaluate the pros and cons of different choices an analyst makes to make the reader aware of the advantages and the disadvantages of the more specific analysis of the EAC dairy trade done later in the report. We identify two different approaches: The identification approach and the process approach.

The identification approach

18. In this approach, NTMs are identified typically using a list of like the MAST list. Historical evidence and academic literature as well as policy experiences from other parts of the world help focus the work. The idea is to find the most binding constraints (van Tongeren, Beghin and Marette 2009; Deardorff and Stern 1997). Many economists favor measurements. Various methods have been used: firm-level surveys (e.g. Wilson and Otsuki 2004), price comparisons (Yue et al., 2006; Ferrantino 2006), cost accounting (e.g. Grothe et al., 2000), econometric estimations (Antle, 2000; Maskus et al., 2005), and cost-benefit analysis (van Tongeren, Beghin and Marette 2009). Quantification is data intensive which is a particular problem in the East African environment. Some studies use stakeholder interviews as the key source of information (e.g. World Bank 2008).

19. The use of historical experiences and best practice from other regions in the world may be misleading in East Africa. Historical experiences would suggest that EAC tariff liberalization is followed by increased use of anti-dumping measures (Drope 2007) or food safety standards (Otsuki et al. 2001). Yet, while food safety standards are increasingly being discussed in the EAC as we shall discuss below, anti-dumping rules are irrelevant. Food safety standards will also be used differently in the EAC than, for instance, in the EU, as consumer incomes and tastes are different and the institutional and technological capacities are weaker. We should note that effective food safety legislation is new to many low income countries. Because of the complexities of food safety legislation they lead to a range of capacity problems in their design and implementation, and well intended efforts may end up causing problems for trade due to design problems and less than perfect implementation. In short, NTBs rooted in food safety concerns may be pushed by both bad and good intentions, where the good intentions are combined with design and/or implementation problems.

20. There are constraints to this approach. Identification requires good data and context-specific knowledge to interpret them. This challenge increases with the level of aggregation. This constraint is well known while the next is often ignored. The real NTB may not be the one identified. In some countries the NTB is rooted in general governance problems rather than in a specific technical measure. Protectionist interests may be linked with politicians or bureaucracies with great discretionary powers. A protectionist instrument may be quickly replaced by another if the need arises. For instance, a food safety standard may make imports excessively costly. The identification approach may reveal this and a follow-up intervention may redesign the standard to be more efficient. The end benefit to trade may however be minimal as the food safety standard is replaced by, say, axle load requirements that have a similar impact on trade.

21. NTMs that are designed to be protectionist will be very difficult to remove without strong political support. The identification approach is most likely to be successful for NTMs caused by poor design or implementation of well intended measures.

The process approach

22. The process approach focuses on getting the process right to exclude opportunities for misuse. The approach does not identify specific NTBs but specific policy processes which are assumed to attract protectionist interest. The policy work is focused on improving the quality of decision making.

23. The WTO SPS and TBT agreements are good examples of this approach. These agreements set procedural rules for the adoption of food safety, plant and animal health as well as technical standards to make sure they are only used for legitimate purposes such as consumer protection. WTO Members are committed to base their measures on sound science and to avoid discriminating between domestic and foreign products or between different foreign sources of supply. These general principles are spelled out in procedural rules with the aim of improving SPS policy design and implementation.

24. Another example is the use of Regulatory Impact Analysis (RIA) in OECD and in some developing countries. RIA has become a tool by which governments learn how to deal with increasingly complex public policy issues in an environment of competitive and open markets. RIA provides social and economic analyses of the impacts of new regulations. The aim is not to dictate particular solutions but to provide the basis for informed decision making. The increasing demand for complex regulation in East Africa makes it necessary to focus on regulatory quality. RIA is a tool to help a decision maker make trade-offs in according with their priorities.

25. The process approach is promising in contexts where it is difficult to identify specific NTBs. Improving the process of policy making aims at reducing general governance problems. Naturally, there are limitations to this approach. It will be most successful when policy processes are weak due to capacity problems and a lack of knowledge. It will be less effective if the governance problems are widespread or caused by powerful lobbies.

The Approach in this Report

26. This report uses a value chain approach. Focus is on the dairy industry as a representative for perishable agricultural commodities. The report is based on desk research

and a 3 weeks fieldwork period in Rwanda, Uganda and Kenya during December 2009. The consultants collected illustrative data and relied extensively on stakeholder interviews. Emphasis was put on interviews with private sector participants and officials working on an everyday basis with practical trade issues.

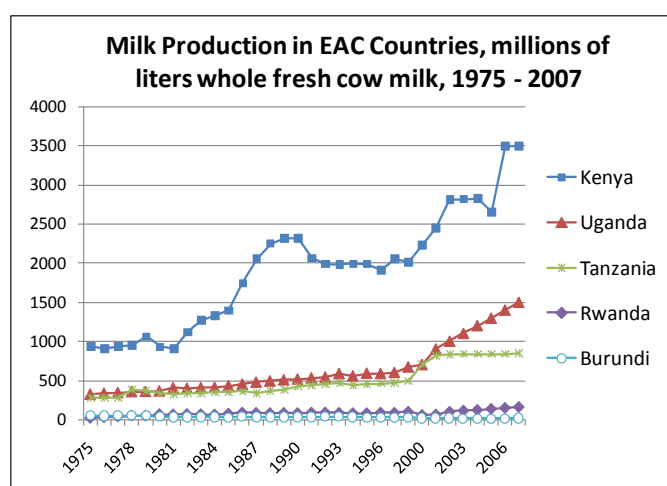
27. The consultants traced dairy trade across the EAC in an attempt to provide a list of hurdles met and costs paid by the private market participant. The strong emphasis on private sector views should be qualified. Private sector representatives tend to have a strong focus on recently experienced troubles and concentrate their efforts on problems they feel they can influence. Costs which appear constant and beyond their influence naturally get less attention including during the interviews. Private market operators also have a highly competitive view. NTBs may be perceived less of a problem if they grant their company a competitive edge. The approach chosen may therefore be less suited to analyze the aggregate costs of a trade regime and more suited to identify specific NTBs and problematic policy processes.

28. The information gathered from the private sector and government officials on the flow of dairy products was supplemented with information from donors and the government on recent policy initiatives. The effect of the recent initiatives was investigated during private sector interviews. In particular, the recent drive towards harmonized EAC dairy standards was analyzed in depth.

III. DAIRY PRODUCTION AND TRADE IN THE EAC

29. Dairy production and marketing are a significant part of the agriculture economy in East Africa. According to FAO data, EAC countries produced around six billion liters of fresh cow milk in 2007 roughly equal to one-quarter of the total for all of Africa (see Figure 1). While less than half of this total would have been available for sale after allowing for on-farm use and production by dispersed traditional herds, market oriented dairying is a major economic activity in East Africa noted for extensive smallholder farmer involvement. In diverse settings throughout the region, dairy has been shown to provide small farmers a regular cash income that can be several times greater than many other types of on- and off-farm enterprise.¹ Other recognized benefits of dairy production include growth linkages to input service providers, milk traders, and dairy processors; the ability to supply nutritious and affordable food to the local population; and opportunities for long-term expansion into growing domestic and regional export markets.²

Figure 1: Milk Production in the EAC Region



Source: FAOSTAT, 2009

30. In terms of regional output, Kenya and Uganda are by far the largest dairy producing nations in East Africa and account for 58% and 25% EAC's total milk supply respectively. Both countries have the capacity to manufacture a wide range of processed products including pasteurized milk and various kinds of higher-value products that are amenable to export including UHT long-life milk and dry milk powder. Like other countries of the region, both Kenya and Uganda also have large and vibrant small-scale trading sectors in which various kinds of milk vendors, milk shop owners, and mini-processors link small farmers with city and town buyers. These markets generally have lower quality requirements than formal processors require and account for 80-85% of total milk marketing in Kenya and as much as 95% of milk marketing in Uganda.

31. In the other EAC countries, dairy marketing takes place on a much smaller scale. Tanzania, for example, is also a large dairy nation measured by total output, but in this case

¹ Staal et. al., 2003; Keyser, 2003; IFAD, 2005; Parsons and Matiru, 2008.

² Bennett, Lhoste, Crook, and Phelan, 2006.

more than 98% of cows are traditional Zebu animals that are highly dispersed and yield very little surplus for commercial processing and trade. Dairy firms in Tanzania therefore only handle about 60,000 to 80,000 liters per day including milk made from imported milk powder.³ Most of this production is absorbed locally and Tanzania is a minor dairy exporter.

32. Rwanda currently produces less than 5% as much milk compared with Kenya (i.e. about 159 million liters in 2007) and processes only 6,000 to 8,000 liters per day compared with roughly 1 million liters per day for Kenya. Despite this low level of output, the Rwanda dairy sector is undergoing great change due to an ongoing Government program aimed at providing every poor household an improved dairy animal.⁴ Since 2001, dairy production in Rwanda has grown by over 250% and a new processing line is now set to come into operation that will increase formal sector capacity by 100,000 liters per day. Like Kenya and Uganda, Rwanda also has a vibrant informal trading sector in which various kinds of small-scale vendors deliver low-cost raw milk to urban and town consumers. Presently in Rwanda, these networks account for over 95% of total milk marketing. Recently, Burundi has produced less than 17 million liters of cow milk annually (0.28% of the EAC total) and is therefore a negligible dairy producer in regional terms.

33. To help understand the strategic opportunities for dairy development and constraints to regional trade, this section aims to familiarize the reader with some of the basic requirements of competitive dairy development and existing trade patterns in the EAC region. Market oriented dairying can be a complex business and there are many challenges to producing high quality products suitable for international trade that must be understood to formulate effective trade policy.

Production and Marketing Systems

34. Commercial dairying is far from simple and generally requires large up-front investments in specialized assets at the farm production, milk bulking, and dairy processing stages of the supply chain to be successful. Even at the smallest scale, such as one or two milking cows, market-oriented dairying entails a significant fixed cost element in the form of improved dairy livestock, animal handling facilities, multi-year vaccinations, and other assets that cannot easily be transferred to other types of farm activity.⁵ Similarly, at the milk bulking stage, investments in stainless steel or aluminum dairy equipment, cooling tanks, transportation systems, quality control procedures, and business management skills are fundamental to commercial success and generally require a multiyear time horizon to cover the initial costs. At the processing stage, investments in milk analysis equipment, laboratory facilities, and even separate production lines for different grades of milk may be required.

35. Adding to the challenge of dairy development, nearly all marketed milk in East Africa comes from smallholder farmers. Kenya is the only EAC country with a substantial contribution from large commercial herds and these farms account for no more than 20% of the intake by formal dairy processors and less than 4% of total marketed production overall. In Uganda and Rwanda, dairy herds rarely go beyond 30-50 productive animals and virtually all milk used for commercial processing comes from smallholder farmers who typically own one to three productive cows and sell through some kind of communal bulking facility.

³ Quaedackers, et. al., 2009.

⁴ Republic of Rwanda, 2009.

⁵ Jaffee, 1995.

Supply chain organization and risks

36. The main stages for a processed milk value chain are indicated in Figure 2. In less advanced systems, raw milk may be sold direct by farmers or small-scale traders to a final consumer without going to a processing facility. With most processed dairy systems, on the other hand, raw milk is almost always handled by one or more bulking agents who assemble the supplies from many producers into commercially attractive quantities before selling to a dairy processor. This is necessary to cover the high costs of milk transportation, but entails a number of important risks in terms of milk from different farmers being mixed together and potential for bad handling or adulteration during the reception, storage, and transportation phases of the assembly operation. To manage these risks effectively requires reliable systems for platform testing of milk quality, hygienic milk handling, and timely delivery of raw milk supplies to a dairy processor.

Figure 2: Value Chain Stages for Processed Milk



37. From a value chain perspective, the additional logistics and costs of formal sector dairying can be a major hurdle to competing with raw milk markets. Not only can the milk spoil if the system breaks down or the milk is incorrectly handled, but each stage must be cost competitive and financially viable to make sense as a business enterprise. Working upstream from the final consumer price, costs and profit margins taken at each stage in the value chain have a direct bearing on the price that can be paid to farmers and, thus, the overall competitiveness of dairy processing. With unpasteurized milk, successful trade mainly requires quick delivery from the farm to final consumer. Metal dairy containers can be useful to prevent the spread of disease and help preserve milk quality, but few other costs apart from access to a reliable transport network are needed if milk can be collected, delivered, and sold to a consumer within a few hours of milking. Where local markets for raw milk are well advanced as in most parts of East Africa, commercial processors are likely to have little scope to dictate quality standards or compete on price for better raw material.

38. Over the long run, the competitiveness constraints of formal sector dairying may also begin to affect opportunities for export development. High-value long-life products that are amenable to export such as UHT milk and dry milk powder are particularly sensitive to raw milk quality and pose special risks to using smallholder supplies without investments in quality control and other supply chain processes that ensure a steady and large enough flow of milk to justify the investment in these processing lines. These extra costs make it difficult for formal processors to offer farmers attractive prices compared with small-scale milk vendors and can therefore be a significant obstacle to export development.

Properties of milk

39. In considering the challenges of international dairy trade, there are a number of specific properties of milk that have a direct bearing on systems requirements and opportunities for smallholder farmers to sell into the formal market economy .

40. First of all, raw milk is highly perishable and deteriorates rapidly unless it is cooled or processed within a few hours of milking. While raw milk from the udder of a healthy cow

contains very few microorganisms and will generally have less than 1,000 total bacteria per milliliter, it may be contaminated soon after milking by the environment and handling equipment. The hygiene and health of the dairy cow and milk handler also influence milk quality and potential for disease to be passed from milk to the consumer.⁶ Moreover, milk is 87% water and its valuable components (fat, proteins, and casein) constitute only a small share of total bulk. Together with perishability, this creates a major logistical dilemma whereby raw milk must be processed soon after harvest and carries relatively high transport costs per unit value.⁷

41. Storage temperature is also critical in determining milk quality as this influences the rate at which the bacteria increase in number. At tropical temperatures, a bacterial cell with a typical generation time of 20 minutes (i.e. the time taken for a microbial population to double in number) will multiply within seven hours to 2 million cells. If the milk were cooled to below 10°C, however, the generation time can be extended to 84 minutes and the same cell would multiply to only 32 cells over the same period.⁸ Total bacteria count in milk is important to dairy processors since pasteurized products including UHT milk will benefit from improved shelf life when made from milk having a total count of not more than 200,000 colony forming units per milliliter (cfu/ml).

42. Moreover, new harmonized trade standards recently agreed by EAC and COMESA Member States recognize three grades of milk and set upper limits on total bacteria count in processed products and raw milk.⁹ For raw milk, the maximum allowable total bacteria count is 2 million cfu/ml total (see Table 1). Moves are now underway to extend the harmonized EAC/COMESA standards to include SADC Member States as well.

Table 1: EAC/COMESA Microbiological Limits on Raw Milk

43. Grade	44. Total cfu/ml
45. I or A	46. < 200,000
47. II or B	48. > 200,000 to 1,000,000
49. III or C	50. > 1,000,000 to 2,000,000

Source: COMESA 2007e.

51. The challenge of smallholder dairy development is also unique in at least two other respects related to the very way that milk is produced. These are:

52. *Continuous production:* Improved dairy cows produce milk over a lactation cycle that lasts anywhere from around 220 days to more than 300 days depending on animal genetics, health, and nutrition (with indigenous livestock, the lactation period may be only 160 days or less). This yield pattern has the benefit of providing farmers a steady source of income, but puts pressure on the milk bulking and processing system to be continuous and reliable.

53. *Seasonal variability in yield:* Milk yields are highly dependent on water and feed availability, which often leads to large surpluses and shortages of milk during the wet and dry

⁶ Omore, et. al., 2005.

⁷ Jaffee, 1995.

⁸ Omore, et. al., 2005, FAO 1979.

⁹ COMESA, 2007a, 2007b, 2007c, 2007d, 2007e, 2007f, 2007g, 2007h.

seasons respectively. These cycles place heavy demands on collection centers, transporters, and processors during the rainy season and may lead to under utilization of the same dairy infrastructure during the dry season.¹⁰ These variations also lead to large price swings, particularly when there is limited processing capacity for long-life products that can be stored and sold throughout the year.

54. Quality variables in milk related to percentages of fat, solids non-fat, and mix of proteins also have a major influence on the economics of dairy processing and, hence, total value that can be shared between dairy chain participants. These properties of milk are determined at the farm level by animal genetics, health, and nutrition and require investments in animal husbandry and on-farm feed production or water supply that may not be necessary or even beneficial when selling to small-scale traders.

Milk marketing

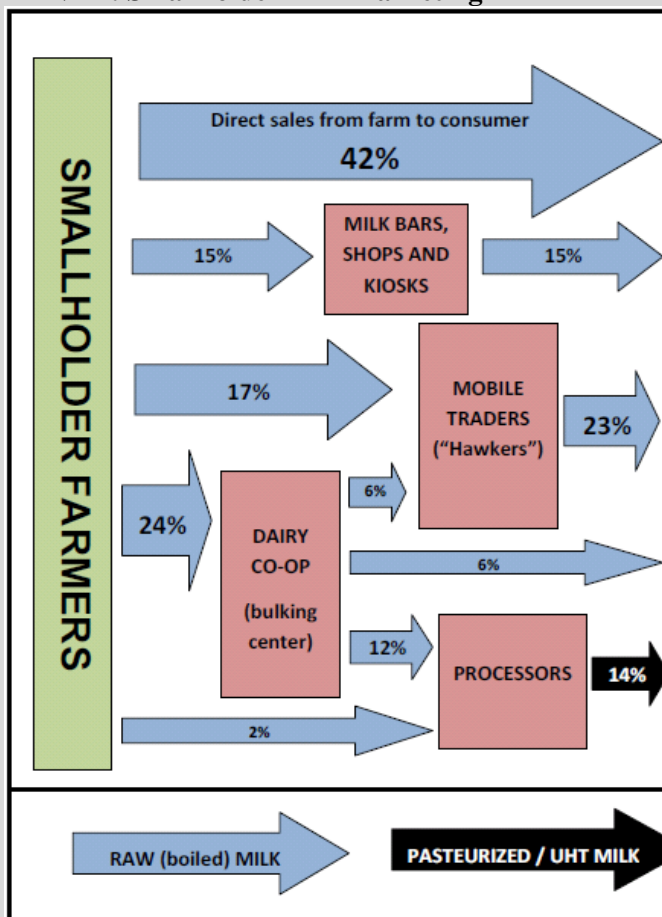
55. A significant challenge to obtaining high quality raw milk suitable for value added processing is that most farmers in the EAC region are able to sell to small-scale traders (see Box 3). Freshness and routine hygiene still count in these markets to prolong the life of raw milk before it reaches a consumer, but small-scale traders otherwise have little interest in quality variables such as protein composition and fat content that matter to commercial processors. Even with regard to bacteria count, small-scale traders have fairly high tolerances since raw milk is almost always boiled before it is consumed. In these systems, therefore, small farmers can easily get away with using plastic buckets and jerry cans that create special risks for processors.

56. Commercial dairy processors have at times been openly hostile to small-scale milk trade, which they

Box 3: Marketing Channels for Smallholder Milk

The chart below for marketed milk in Kenya shows that an estimated 86% of smallholder milk reaches the final consumer as a raw product traded through various kinds of small-scale networks. Raw milk is nearly always boiled at home and may also be heat treated or lightly processed by the final vendor to add value and kill disease-causing bacteria. Although conditions vary from country to country, this overall pattern is typical of dairy trade throughout the EAC region. In Uganda and Rwanda, small-scale traders account for an estimated 95% of total milk marketing.

KENYA: Smallholder milk marketing



Source: Muriuki, et. al. 2007, p. 48 (traded milk only, excluding milk fed to calves and/or consumed by the farm family).

¹⁰ Jaffee, 1995.

view as unfair competition, risky to public health, and a major impediment to value-added production.¹¹ Although there is nothing inherently dangerous with consuming raw milk so long as it is fresh and clean, the potential health risks from improper handling and adulteration give governments reason to regulate dairy trade and emphasize modern value chain development.

57. Equally, however, it is also apparent that informal milk markets are strategically important, particularly to the rural and urban poor. Not only do most consumers in East Africa have a taste preference for raw milk, but from a poverty reduction point of view, small-scale milk traders can be highly beneficial in that these buyers have lower costs and so usually pay higher prices to farmers and charge lower prices to consumers than commercial processors can afford. Typically, small-scale traders sell raw milk to urban consumers for less than half as much compared with pasteurized milk from a commercial processor so are of major strategic importance to total demand and long-term opportunities for market participation by smallholders.

Dairy Processing

58. Dairy processing extends the life of milk and adds value before final sale. Some products such as fermented milk, butter, cream, and most types of cheeses, and yoghurt can be efficiently treated on a small-scale basis using relatively simple technology. Other products require more complex processes and higher investments in plant and equipment. Milk pasteurization can be done on a relatively small scale, although economies of scale are realized in mechanized continuous heating and cooling systems, and ‘lumpy’ investments in cold storage are required. The production and packaging of long-life UHT milk and dried milk powder, on the other hand, require sophisticated and capital-intensive techniques so are associated greater economies of scale and higher degrees of asset specificity.¹²

59. Beyond the problems of investment costs, quality requirements can be a particular challenge with some higher-end products. As described, raw milk with a total bacteria count greater than 200,000 cfu/ml is unsuitable for UHT production due to the probability of surviving spores and continued enzymatic activity that will cause the packaged milk to go bad. Similarly, milk powder must be made from very good quality milk with a low total bacteria count for the machines to work efficiently and avoid expensive shutdown periods for cleaning. Processors throughout the EAC have therefore had to introduce special quality control procedures to produce these export products such as only accepting milk smallholder from bulking centers with a good reputation for consistent platform testing and use of high-concentration ethanol tests and lacto-scan quality analysis before the milk enters the production line. Naturally, these procedures add to total costs and compound the challenge of competing with small-scale traders domestically and in other EAC markets.

60. Another limiting factor to regional exports is that EAC countries mostly produce a similar range of value-added products including UHT milk and various types of yoghurt, butter, ghee, and basic kinds of cheese. Therefore, while these commodities generally have high enough value and long enough shelf life to be traded internationally, local processors still enjoy a good amount of natural protection in domestic markets because of transport costs alone. Similarly, while Kenya and Uganda are currently the only countries in the EAC region

¹¹ See Leksmono, et. al. 2006.

¹² Jaffee, 1995.

with the capacity to manufacture dry milk powder, regional trade opportunities are constrained by global competition from very advanced dairy nations that make it difficult to compete on price for this generic commodity. Moreover, rainfall patterns in most dairy producing areas of the EAC region are similar meaning that East African countries are usually either flush or scarce of milk at the same.

61. It is also worth noting that most dairy processors in the EAC operate significantly below installed capacity. Although the situation varies from firm to firm, this problem of excess capacity adds to unit cost and therefore militates against regional trade. Kenya, for example, has an installed capacity to handle around 2.5 million liters fresh milk per day but currently processes less than 1 million liters per day meaning the industry as a whole operates at no more than 40% capacity.¹³ In Uganda, dairy processors have the capacity to process around 560,000 liters per day including a milk powder plant with 200,000 liters per day capacity. In recent years, however, Uganda's dairy plants have handled only about 90,000 liters daily equal to just 25% of capacity excluding the milk powder plant. With the milk powder plant, total capacity utilization is only 16%.¹⁴

62. In Rwanda, a new processing line with the capacity to handle 100,000 liters per day will come online in early 2010 and bring the country's total installed processing capacity to around 188,000 liters per day. As of late 2009, however, total intake by commercial processors was less than 8,000 liters per day (i.e. 4.2% of expected capacity with the new plant). This compares to an estimated 160,000 liters per day sold through low-cost informal channels. Despite considerable efforts by government and donor-funded project to develop new collection points for smallholder milk, it appears that Rwanda, like other EAC countries, will face a considerable challenge with regard to excess processing capacity for some time to come.

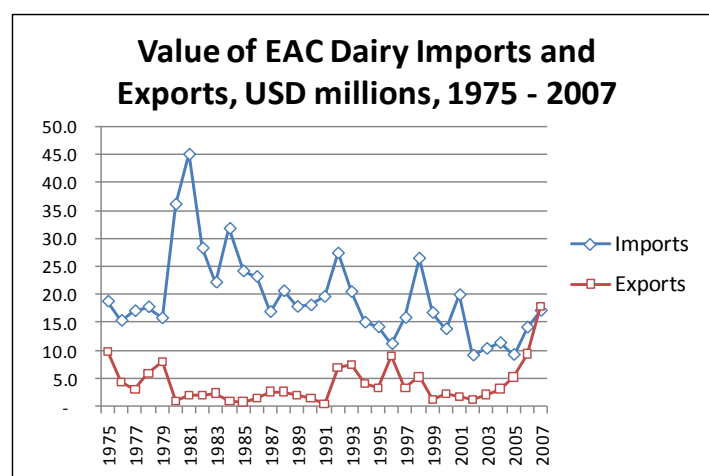
Regional Trade Patterns

63. Until recently, the EAC region has been a firm net dairy importer. As illustrated in Figure 3, dairy export value grew strongly during most of the last decade and surpassed import value in 2007. More recently, problems with drought in 2008 and 2009 as well as the post-election violence in Kenya in 2008 have led to reduced exports and corresponding rise in imports to satisfy total demand. Nevertheless, with a return of favorable weather conditions (and continued political stability), there is every reason to believe the EAC region could emerge as a strong dairy exporter with trade to neighboring African countries in the EAC and COMESA trade blocks and to other markets further afield.

¹³ KDB website at www.kdb.co.ke.

¹⁴ DDA, 2008

Figure 3: Total Value of Dairy Imports and Exports by all EAC Countries including Intra-Regional Trade



Source: FAOSTAT 2009

64. Table 2 takes a closer look at the annual trade balance for each of the EAC Member States since 1997. As shown, Kenya is the only country in the region to have a sizeable trade surplus in dairy. Except 1998 when Uganda had a small trade surplus, all other countries are solid net dairy importers. Bearing in mind that each country still exports dairy products at the margin, these patterns suggest that the most important trade issue for the EAC region at present is import facilitation and, with time, import substitution rather than exports. The purpose of trade, after all, is to achieve gains according to each country's comparative advantage rather than to maximize on foreign exchange earnings or similar mercantilist objectives. During fieldwork in the EAC, the consultants met many stakeholders who doubted the benefits of imports. By some, exports were seen as a measure of success, and imports were seen as a sign of failure. A mercantilist view of trade is still fashionable within many agencies. The highly skeptical views on imports were accompanied by often overly optimistic views on exports. Scholars within the EAC still have much work to do convincing policy makers that imports play a vital economic role and that national self-sufficiency is not a viable strategy for small economies. By value, the most important dairy imports to the EAC region are milk powder used for industrial processing, followed by butter, cheese, and long-life liquid milk in that order.¹⁵

Table 2: Dairy Trade Balance of Individual EAC Countries (USD '000)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Kenya	(889)	(6,829)	(5,266)	(3,844)	(8,345)	(2,080)	129	(961)	2,088	4,496	11,967
Uganda	(830)	151	(1,034)	(524)	(609)	(2,348)	(2,740)	(1,938)	(1,849)	(2,813)	(4,780)
Tanzania	(2,504)	(6,443)	(3,962)	(4,518)	(3,706)	(2,664)	(3,247)	(3,006)	(2,776)	(3,226)	(3,937)
Rwanda	(5,535)	(5,351)	(4,306)	(1,026)	(3,583)	-	(1,083)	(1,342)	(586)	(755)	(1,527)
Burundi	(2,834)	(2,727)	(940)	(1,637)	(1,946)	(829)	(1,263)	(980)	(825)	(2,440)	(1,003)
TOTAL EAC	(12,592)	(21,199)	(15,508)	(11,549)	(18,189)	(7,921)	(8,204)	(8,227)	(3,948)	(4,738)	720

Source: FAOSTAT, 2009 (total export value – total import value)

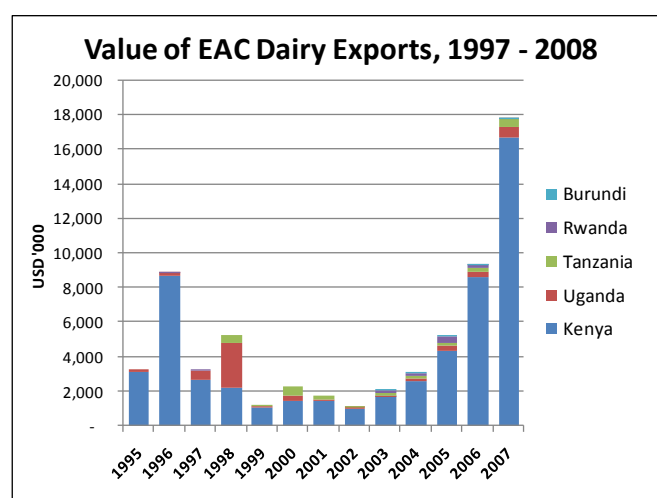
65. It should also be kept in mind that dairy exports presently account for less than 1% of total marketed production in the EAC. In Kenya, for example, only 14% or so of total marketed milk is handled by dairy processors (as described in Box 3) and the nation's largest

¹⁵ RATES, 2004.

processor says that exports account for no more than 10% of total production. Similarly, Kenya's second largest dairy processor says it has currently stopped exports because of the recent drought and mandate to serve domestic markets first. Of course, some dairy firms in the EAC are geared much more toward export production, but the overall pattern whereby most milk sales are informal and most formal sales are geared toward domestic consumers must be kept in mind when discussing trade policy. Exports are only a minor part of the EAC dairy economy.

66. Next, Figure 4 looks at the value of EAC dairy exports by exporting country. As shown, export trade has been overwhelmingly dominated by Kenya as the region's largest dairy producer. In the years covered, Kenya exported an accumulated total of USD 55.5 million of dairy products equal to 86% of the EAC total compared with Uganda which is the EAC's second largest dairy producer and exported just USD 5.6 million (9% of the EAC total). Over the same period, Tanzania exported USD 2.5 million (4% of the EAC total), Rwanda exported USD 963,000 (1%), and Burundi exported USD 201,000 (0.3%).

Figure 4: Value of EAC Dairy Exports by Exporting Country, 1997-2008

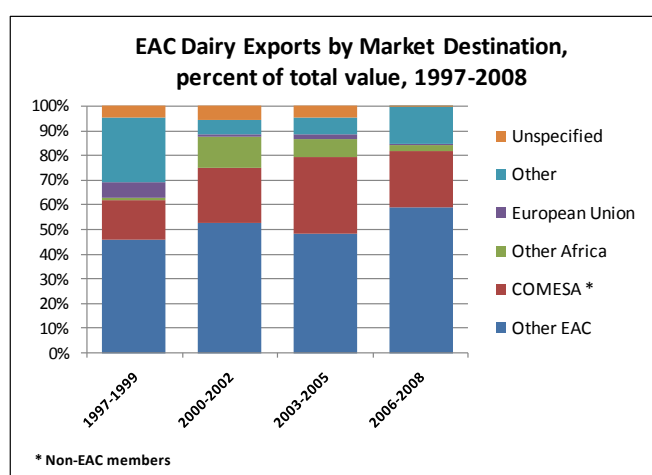


Source: FAOSTAT, 2009

67. With regard to market destination, Figure 5 shows that 56% of total EAC dairy exports since 1997 have been to other EAC countries. Together with non-EAC COMESA members, regional trade has accounted for 79% of export value since 1997.¹⁶ Moreover, intra-regional trade has become increasingly important. Of the individual exporting nations, the EAC and COMESA trade blocks absorbed 67% of Kenya's dairy exports from 1997 to 1999 compared with 88% of total exports in the period from 2006 to 2008. Uganda relies even more heavily on intra-regional trade whereby EAC and COMESA markets absorbed more than 95% of Uganda's dairy exports in the period from 2006-08.

¹⁶ Of the EAC Member States, only Tanzania is not currently a member of COMESA.

Figure 5: EAC Dairy Exports by Market Destination, 1997 - 2008



Source: COMSTAT, 2009

68. Table 3 below takes a closer look at the total value of dairy exports by exporting and importing country. In this table, the total value of all exports is USD 34.05million. Full details are given in appendix 2.

Table 3: Dairy Export Values by Exporting and Importing Country, 1997-2008

Importing Country	Exporting Country							
	Kenya		Uganda		Tanzania		Rwanda	
	USD	% total	USD	% total	USD	% total	USD	% total
Other EAC								
Kenya	..	..	2,228,091	40%	259,954	15%	-	0%
Uganda	7,581,012	28.6%	..	..	53,604	3%	-	0%
Tanzania	4,943,254	18.7%	238,277	4%	..	..	-	0%
Rwanda	694,092	2.6%	1,162,492	21%	2,431	0.1%	..	..
Burundi	1,864,926	7.0%	41,630	1%	85	0.0%	1,929	1%
COMESA								
Congo DR	3,038,516	11.5%	309,887	6%	59,360	3%	148,653	46%
Egypt	808,114	3.1%	176,965	3%	-	0%	-	0%
Sudan	697,235	2.6%	438,259	8%	-	0%	-	0%
Other COMESA	2,043,162	7.7%	129,610	2%	49,259	3%	-	0%
Rest of Africa								
Somalia	1,192,335	4.5%	-	0%	-	0%	-	0%
Other Africa	70,442	0.3%	921	0%	6,070	0%	-	0%
European Union	88,460	0.3%	235,427	4%	49,191	3%	31,820	10%
Other international	3,263,339	12.3%	492,956	9%	1,158,245	68%	1,392	0%
Unspecified	196,874	0.7%	95,968	2%	58,137	3%	141,117	43%
TOTAL	26,481,760	100%	5,550,485	100%	1,696,336	100%	324,911	100%

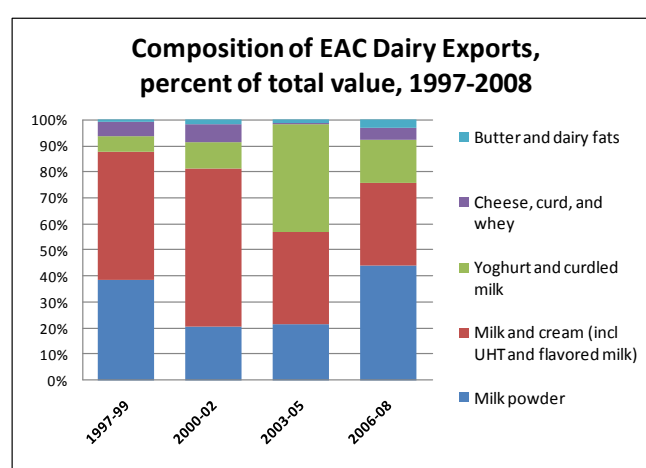
Source: COMSTAT, 2009

69. As shown, Kenya and Uganda are each other's largest trade partner in dairy. From 1997 to 2008, total dairy trade between these countries was slightly more than USD 9.8 million or 29% of total EAC dairy exports. The DRC is another important market for EAC countries having absorbed 10% of total exports (USD 3.6 million) since 1997. Other international markets of importance to the EAC include Yemen (USD 2.3 million total exports by Kenya and Uganda), Somalia (USD 1.2 million by Kenya), and Sudan (USD 1.1 million by Kenya and Uganda). According to official data, Tanzania exported USD 1.2 million of whey to Oman in 2008 equal to 60% of Tanzania's total dairy exports from 1997-2008. Beginning in 2003, Kenya has sold an average of USD 79,000 dairy products annually

(USD 416,000 total) to Ascension Island. The European Union meanwhile has accounted for just 1% of total EAC dairy exports equal to USD 405,000 total trade value.

70. Finally, Figure 6 looks at the composition of EAC dairy exports by product type. For the period from 1997 to 2008, dry milk powder and long-life liquid milk (including various types of flavored milk) and cream have together accounted for 64% of total EAC export value. These products do not require refrigeration and are best suited to international trade since they are relatively easy to transport by road. Fresh yoghurts and fermented milk (i.e. curdled milk or *mala* as it is known in Kenya) have been another important export category but must travel by refrigerated truck or air so are more expensive and risky to ship. Likewise, cheese, butter, dairy fats, and dairy ices must be refrigerated and are inherently vulnerable to any kind of delay during transit.

Figure 6: Composition of EAC Dairy Exports by Product Type



Source: COMSTAT, 2009

71. Raw milk is generally unsuited to international trade because of its highly perishable nature and potential to carry disease-causing bacteria. Rwanda and Uganda specifically prohibit the importation of raw milk. Kenya maintains a similar policy, but was recently found allowing a Kenyan-owned processor to take unprocessed milk collected around Arusha to Kenya for processing and packaging near Nairobi as explained in Box 4.

Box 4: A trade dispute between Kenya and Tanzania

In 2004, the leading Kenyan dairy, Brookeside, acquired a dairy processing plant near Arusha in Northern Tanzania. Initially the plan was to produce UHT milk in the Tanzania plant, but the Kenyans found that the local milk production was not sufficient to operate the Tanzanian plant at an economically viable scale. Instead the raw milk was driven across the nearby Kenyan border and processed there.

This upset the Tanzanians. Dr. Kamala, the Tanzanian Minister of Agriculture demanded that Tanzanian milk should be processed in Tanzania and accusations about predatory pricing and access difficulties for Tanzanian producers to the Kenyan market were exchanged. Brookeside maintained that by using the Tanzanian plant as a collection point they had secured milk collection from 3,000 small Tanzanian farmers.

The dispute led to high level meetings between the Kenyan owners, led by the Deputy Prime Minister, Mr. Uhuru Kenyatta, whose family owns Brookeside and the Tanzanian authorities led by Dr. Kamala. In East Africa, dairy trade may turn into high politics.

Source: African Press International (<http://africanpress.wordpress.com/2008/09/09/trade-war-has-intensified-between-kenya-and-tanzania/>) accessed on February 12, 2010.

IV. TRADE REQUIREMENTS AND BARRIERS TO TRADE

72. Having considered the fundamental properties of milk and recent trade patterns for dairy, this section looks in detail at the requirements for dairy trade and potential barriers to trade in the EAC region. Although nearly everyone met for this study said the regional trade situation is now good and that dairy products are able to move across borders without major hindrance, EAC Member States have a long history of trade disputes flaring-up in dairy that could potentially arise again.

73. Looking at the current situation, it is also apparent that formal sector traders face many legal requirements that take time to complete and add to the total cost of regional trade. Before an export deal can be concluded, for example, participants on both sides of the border must obtain a permit from the national dairy board or other relevant dairy authority to authorize the transaction. Veterinary certificates, certificates of origin, national quality seals, and quality test results for each batch are also required. Each of these requirements has the potential to be used as a non-tariff barrier if ever there is a perceived benefit from preventing exports or keeping a neighboring country's dairy products out.

74. Moreover, just as the additional costs of formal sector dairying add to total costs and create competitiveness constraints at the domestic level, so too do the extra costs of formal trade create problems compared with informal traders who bring small consignments across borders in busses and car boots. Statistical information on informal dairy trade was not available only that the border agents and formal traders met for this study said informal movement of dairy products is very common. As a customs inspector on Uganda-Rwanda border explained, "It is impossible to stop informal dairy trade since we would have to inspect all cool boxes and packages and then people would miss their bus." Efforts to minimize the costs and time required for formal sector dairy trade and make these channels more appealing, therefore, can be of strategic benefit not only to the participants in the deal, but also for improved dairy sector competitiveness overall (see Box 5).

Box 5: Formal Trade Requirements as a Competitiveness Risk

A good example of how quality standards and laboratory testing requirements can militate against formal sector trade is the story of Uganda's exports of butter to Rwanda.

In this case, Rwanda's only licensed trader bringing butter into the country decided to stop imports because of difficulties with recognition of Ugandan quality certificates and demands for additional laboratory tests by the Rwanda Bureau of Standards (RBS). According to the importer, this was because the batch numbers were not identical throughout each consignment since the butter was manufactured on different days. This problem also meant the trader could not obtain pre-clearance for the goods. As a result, the importer decided it would be easier to stop trading in butter and cancelled all orders with the Ugandan supplier.

Despite this move, Ugandan butter remained on store shelves in Kigali. As explained by border officials, it is impractical to stop small consignments from crossing and many dairy products are brought into Rwanda in small quantities, sometimes in cool boxes but otherwise with no refrigeration or other kinds of quality control. Similar to how formal sector dairy chains have a difficult time competing with informal milk vendors in domestic markets this story shows that formal traders also have a difficult time competing with informal traders in the international market.

While the efforts to regulate dairy trade and harmonize regional standards may seem like an obvious step towards an improved trade regime, therefore, such moves can actually have negative consequences for formal sector operators. While it is important to have a well-regulated trade system, the system must be cost competitive and simple to use in order to avoid creating further competitiveness constraints for formal dairy operators.

Recent trade disputes

75. As noted, the EAC region has a long history of trade disputes flaring-up in dairy. As recently as the first quarter of 2009, Uganda's largest milk processor alleged that Kenya had introduced several measures that it believed were aimed specifically at protecting Kenyan dairy plants. Specifically, the Ugandan processor complained the Kenya Bureau of Standards (KEBS) was insisting on new conformity assessments instructions for imported milk powder that required 34% protein in full cream powder when the highest level that can be achieved from cow milk is 25-26%. The Ugandan processor also complained about Kenya banning foreign registered four-axel trucks and said that the Kenyan Revenue Authority (KRA) was holding Ugandan long-life milk at the border for more than two weeks, even when the consignments had all of the required documents. As a result, transporters were refusing to carry Ugandan products and exports more or less ground to a halt. Other dairy processors in Uganda and Tanzania made similar complaints at the time and alleged that Kenyan authorities were using whatever excuse they could find to protect local producers and keep foreign dairy products out of the country.¹⁷

76. Equally, Kenyan exporters have complained that Uganda requires additional laboratory analysis of all Kenyan dairy products whereby samples of each shipment must be sent in advance to receive the required permits. According to EAC agreements, national quality seals are meant to be sufficient proof of conformity with EAC standards, but additional testing by Uganda (and other EAC countries) has still been required leading to extra cost and delay. Moreover, Kenyan processors say that Uganda maintains higher-level national dairy standards with regard to adulteration and other quality variables than apply in the domestic market meaning they must produce special "export quality" batches to trade with their regional neighbor.

77. During a previous dispute in 2002-2003, dairy trade between Kenya and Uganda effectively came to a complete stop. According to dairy insiders in Nairobi, Kenya first refused to grant import licenses dairy products from Uganda and Uganda followed suit by refusing to grant import licenses to products from Kenya. To justify these moves, various objections were raised on both sides of the border over the quality standards of the other country's product, labeling and packing requirements, and reliability of national quality seals. A similar non-tariff dispute arose in 2004 between Kenya and Zambia when a shipment of UHT milk from Kenya was rejected on quality grounds and alleged non-compliance with domestic standards in Zambia.

78. By all accounts, the current trade situation has improved considerably. Other than complaints for the additional laboratory tests required by Uganda and large amounts of paperwork required for trade by all countries, no major barriers to trade were identified by any of the people met for this study. Instead, the most common remark was that as long as all the paperwork is in place everything works fine. Some of the people interviewed attributed this improvement to the recent drought in Kenya, which they say has increased the country's need for dairy imports and warned that the situation could deteriorate next time the rains are good. Others, however, took a more favorable view and put the improvement down to the general maturing of the dairy industry whereby dairy processors and dairy regulators in all

¹⁷ For articles in the press on recent trade disputes, see Mwamunyange, 2008; Omolo, 2008; and Michael, 2009.

EAC countries have come to realize there is much more to gain from free trade than by working against it.

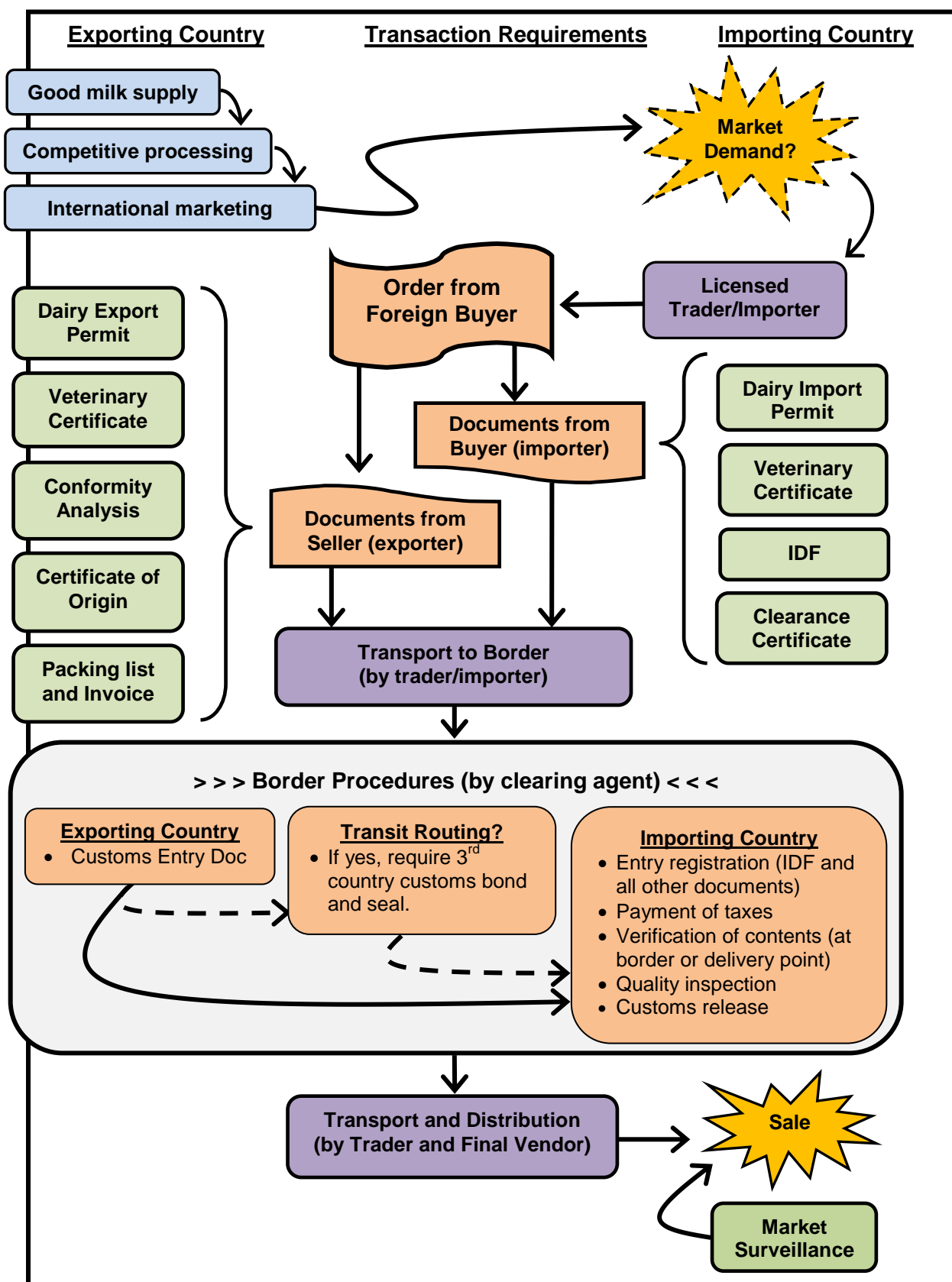
79. From an institutional perspective, for example, one very important development in favor of free trade was said to be the formation of the East African Dairy Regulatory Authorities Council (EADRAC) in 2006. EADRAC is composed of all national dairy boards or other government body responsible for the dairy industry in EAC countries. EADRAC meets twice a year with the purpose of providing a regular venue for dialogue on regional trade issues, non-tariff trade disputes, and other matters of regional importance. According to industry insiders, EADRAC was instrumental in resolving the complaints of NTBs against Kenya in 2009. EADRAC members explained that the phone lines are always open whenever there is an issue to discuss and emphasized their strong belief that EADRAC will make future trade disputes less likely.

80. Despite this favorable outlook, it is apparent that a number of risks remain that need to be understood. To make sense of the current trade system and help policymakers avoid the potential risks, this section of the report a diagnostic approach by tracing the specific requirements for EAC dairy trade from start to finish. By comparing the formal requirements with current practice, this analysis aims to identify potential bottlenecks and threats to regional free trade as well as areas where new policies or procedures may be needed to support the regional free trade aspirations of EAC members.

Requirements for Trade

81. Figure 7 on the next page provides a broad overview of current requirements for dairy trade in the EAC region. As shown, successful international trade begins with a competitive production and marketing system in the exporting country and is dependent on market demand in the importing country. Even before any potential non-tariff barriers come into play, therefore, there are many challenges to successful dairy trade as described in the previous section of this report. While international trade can be important to absorb seasonal surpluses and help even out large price swings between the wet and dry seasons, therefore, it is also clear that efforts to address domestic bottlenecks are likely to have greater impact on overall dairy sector performance than discrete efforts focused on improving the regional trade system only. As described in Section VI, for example, there is a particular risk that the newly harmonized EAC dairy standards may be used to limit small-scale milk markets to the detriment of the rural and urban poor alike.

Figure 7: Flow Diagram of EAC Trade Requirements for Dairy



Implementation of Trade Procedures

82. With this broad sketch of regional trade requirements in mind, the next step of the diagnostic analysis is to examine each of the procedures in greater detail to identify areas where current trade practices deviate from or otherwise threaten the EAC's regional free trade aspirations. Many of the same constraints apply to other commodities as well, but as a perishable good, dairy is particularly vulnerable to any non-tariff obstacle and provides a good case study to draw lessons for other sectors.

83. In interpreting this discussion, it should also be kept in mind that agriculture and livestock products normally require additional procedures for international trade compared with other basic commodities. Agricultural trade is an area that has been strongly influenced by international integration in the way discussed in section II. International integration brought new issues to the attention of policy makers. Sanitary and phytosanitary (SPS) issues are such an example. They cover food safety, animal and plant health. In dairy trade food safety and animal health require special attention. The risk of transfer of diseases to humans and animals through dairy trade is real and this is reflected in trading procedures like food safety measures and veterinary certificates. These extra procedures have the potential to represent a significant threat to regional free trade if the process for obtaining the required documents is not transparent and/or otherwise subject to political interference or administrative judgments based on non-scientific criteria.

Licenses and certificates

84. As shown in figure 7, various kinds of licenses, permits, and certificates are required for dairy trade within the EAC region that include:

- **Dairy export permit**
- **Dairy import permit**
- **Veterinary certificates**
- **Conformity analysis**
- **Certificate of origin**
- **Packing list and invoice**
- **Import declaration form**
- **Clearance certificate**

These licenses, permits, and certificates are discussed in more detail below.

85. *Dairy export permit:* On the export side, dairy permits or “dairy board certificates” as they are sometimes called, are issued by the relevant dairy authority to authorize the shipment abroad. Very often, dairy certificates are issued together with veterinary certificates and/or certificates of quality analysis as a kind of umbrella document to show that the exporter and specific product being traded meets all required conditions for trade. In Kenya, dairy permits are issued together with the veterinary certificate and exporters are required to make a new application to the KDB head office for each shipment they propose to sell abroad. Rwanda and Uganda follow a similar process except that the dairy authority usually grants a basic trade license that remains valid for a period of time on top of which the exporter will assemble separate veterinary certificates for each consignment.

86. An important risk with dairy export permits is that these can be used to limit trade if the exporting country's dairy authority ever sees a benefit in doing so. During its review of

each export application, for example, the KDB website says, “the Board will take into cognizance the prevailing dairy production situation in the country”. The KDB maintains similar controls over dairy imports and only grants import licenses after it considers the prevailing production situation in Kenya. In practice, the KDB was said to be extremely helpful in facilitating exports by each of the Kenyan firms met. Nevertheless, these powers and similar powers in other countries are a significant threat to the ideal free trade situation based purely on market economics. Certifying a product for export on health and safety grounds, is very different from deciding whether traders should be allowed to engage in international trade based on an administrators perception of local supply and demand conditions. Unless dairy traders are certain of always being able to obtain the required permits, there is an inherent risk to exporting that stands to undermine the dairy firm’s business plan.

87. *Dairy import permit:* Just as dairy processors are required to obtain an export permit, so too are dairy importers required to obtain a permit from their local dairy authority. In Uganda, the Dairy Development Authority (DDA) issues import permits quarterly based on a declaration of how much and what kind of dairy products the importer intends to bring in. Importers are not allowed to go beyond the declared amount and must comply with all other quality and laboratory testing requirements described below.

88. In Rwanda, importers must apply for a permit through the Rwanda Animal Resources Development Authority (RARDA). Specifically, on collecting the application forms from RARDA, the trader must take samples of the product to the Rwanda Bureau of Standards (RBS) to obtain a “certificate of analysis”. The analysis was said to take about two business days. When the RBS certificate has been issued, the trader is able to return to RARDA and obtain the import permit. For large and medium-scale traders that are known to RARDA, the

Box 6: Procedures to Import and Export Dairy Produce from Kenya

The Kenya Dairy Board (KDB) website describes the procedures to import and export dairy products from Kenya as follows:

Procedures to import

1. Obtain a pro forma invoice and certificate of quality pertaining to the dairy products to be imported
2. Make an application to the KDB (Head office) upon payment of the necessary fee. The application form must be filled and copies of the pro forma invoice and certificate of quality attached.
3. The application is reviewed by the KDB for recommendation. During the review, due consideration is made on the prevailing status of dairy production in the country.
4. If the application is recommended, the application is forwarded to the Department of Veterinary Services to issue a ‘certificate of no objection’ upon due consideration of the veterinary conditions in the exporting country and upon payment of the necessary fees.
5. Upon issuance of the ‘no objection certificate’ the Kenya Dairy board issues an import permit on payment of the necessary fee.
6. On arrival of the dairy products into the country, a clearance certificate for the consignment is issued by the Board to facilitate clearance with the customs authority.
7. At the same time, an import levy of 7% C.I.F value of the consignment (*from any non-EAC country*) is paid to the Kenya Dairy Board.

Procedures to export

1. Make an application to the Kenya Dairy Board (Head office). An application form is issued on payment of the requisite fees
2. The application is reviewed by the Kenya Dairy board for recommendation. During the review, the Board takes into cognizance the prevailing dairy production status in the country
3. Upon recommendation, the application is forwarded to the Department of Veterinary Services for consideration. The Department will determine the existing veterinary conditions in the country before issuing the ‘no objection to export certificate’. A fee is charged for the certificate.
4. Once the ‘no objection to export certificate’ is issued, the Board proceeds to issue a permit to export milk upon payment of the requisite fees.

Source: KDB website

import permit is issued for 12 months. New traders, however, are required to apply for a fresh permit for every shipment until they establish their own record of competence at which point they may be approved for a long-term permit. In Kenya, import and export permits are always issued on a case-by-case basis (see Box 6).

89. *Veterinary certificate:* Veterinary certificates are required from both the importing and exporting country. On the export side, the intent is to show that the dairy product is made of milk from healthy, disease free animals. Similarly, on the import side, the certificate is to acknowledge that the local veterinary authorities do not have any concerns for the animal health status in the exporting country.

90. As with other requirements, the traders met for this study did not raise any major concerns for obtaining the veterinary certificate for dairy, except to say that it demands a considerable amount of time and effort to collect. In Kenya, for example, veterinary certificates are issued separately for every shipment as part of the application for an import or export permit and takes three business days to process on top of the time required for KDB to review the application and make its own recommendation. Since milk processors normally obtain their supplies from the same or similar sources throughout the year, one way to streamline the trade process would be to issue the veterinary certificates on an annual or even quarterly basis rather than for each individual shipment. If a particular disease breaks, then the blanket no-objection letter could easily be suspended.

91. While the requirement for veterinary certificate when trading livestock products is not unusual, one risk to consider with dairy is that these could potentially lead to calls for establishment of disease-free areas. Certification of disease free livestock areas in Africa is an extremely difficult and complex business. Large parts of the continent are endemic to foot and mouth disease, anthrax, and rinderpest, along with various zoonotic diseases that have a potential to be passed to humans. Efforts to create certified disease free areas have proved difficult because of the requirement to limit livestock movement and other factors. While animal health risks in dairy herds can normally be controlled with regular vaccinations, a further challenge with dairy is that most milk in East Africa comes from smallholder farmers. Because of the requirement for communal bulking, traceability to the individual farmer is basically impossible meaning that considerable scope exists for an importing country to question the source of milk and reject dairy products on animal health grounds.

92. *Conformity analysis:* Beyond the trade licenses and certificates issued by the local dairy authority and veterinary departments, each country's national bureau of standards also plays a role in sanctioning dairy trade. To begin with, dairy manufacturers are required to register with their national bureau of standards for the purpose of obtaining the national quality seal. According to formal EAC agreements, each country's quality mark should be accepted by all other EAC members as sufficient proof that the dairy plant and dairy product conforms to regional health and safety standards. A computer system has been developed that allows border inspectors to check whether individual EAC products have been awarded the quality mark or not.

93. In practice, however, the principle of mutual recognition of national quality marks is not always applied to dairy and additional laboratory analysis is routinely carried out as a condition for regional trade. In Uganda, for example, the DDA has required dairy importers to send samples of every export batch to the Uganda National Bureau of Standards (UNBS)

to obtain a local quality certificate. Batch numbers and manufacturing dates are verified at the border to ensure they match the samples that were sent to UNBS for testing.¹⁸ Occasionally, samples are drawn at the border even with the UNBS pre-approval documents. Exporters say the testing normally takes two to three business days but can sometimes take much longer depending on any backlogs at the UNBS facility.

94. In an apparent change of this policy, dairy importers reported that the Uganda DDA issued a letter in December 2009 to say that it would no longer require every foreign consignment to be analyzed at UNBS. While the operational details of the new policy were still being worked out at the time of data collection, the essence of the letter was that dairy exporters would have the option of carrying out the laboratory analysis in the country of origin or in Uganda. This change in was said to be a specific result of a recent meeting of EADRAC. While this anticipated change is a clear step in the right direction, the new policy still appears to fall short of the agreed EAC principle whereby each country's national quality seal should be accepted as sufficient and routine proof of conformity with regional standards.

95. Moreover, the problem of additional quality analysis is not unique to Uganda. Exporters to Kenya say they must provide independent laboratory results for each batch in addition to proof of the national quality mark. Likewise, dairy traders in Rwanda said that the Rwanda Bureau of Standards (RBS) sometimes insist on additional laboratory work regardless of the foreign country's quality mark or other foreign laboratory results, which are always required. Similarly, in Tanzania, dairy imports must be registered with the Tanzania Food and Drug Authority (TFDA) and Tanzania Dairy Authority (TDA) in addition to carrying the exporting country's quality seal.

96. Taken together the standards question remains an important challenge to EAC free trade aspirations. On the one hand, EAC countries have committed themselves to mutual recognition of each other's quality seals, but in practice, there is an evident lack of confidence in foreign quality marks that have led to demands for extra laboratory analysis and delays in the trade process. According to a senior representative of UNBS, this issue is currently being discussed between EAC countries in an effort to harmonize certification procedures and specify the exact competencies required of each certifying body. Whether or not EAC countries can reasonably expect to develop the full set of competencies needed to test dairy products according to the letter of all regional standards any time soon, however, is unlikely and would almost certainly involve very high costs that are disproportionate to the value EAC dairy exports.

97. With regard to international quality marks, HACCP, ISO, and other kinds of certification are not specifically required for regional dairy trade. Nevertheless, these systems are still used by some dairy exporters to keep check on their own management and quality control procedures even if they do not go all the way for full certification.

98. *Certificate of origin:* Per the terms of the EAC Free Trade Agreement, Certificates of Origin are used to verify the goods were produced within the EAC region so that the importer can avoid paying import duty. Certificates of Origin are provided by the exporter as part of

¹⁸ If samples were not sent to Uganda in advance (by airfreight or other means), UNBS inspectors will draw samples at the border and take them to Kampala for analysis. The goods are allowed to proceed, but only with a customs bond to guarantee they are not offloaded and sold before the laboratory results are back.

the trade deal. Although the procedure for issuing certificates of origin varies from country to country, no concerns were voiced for this process by any of the people met. In Uganda, exporters said the process works extremely well and reported that all they must do upon registration is to buy a book of blank certificates from the Uganda Export Promotion Council and return the receipt stubs when the book is finished. In Kenya, certificates of origin for dairy are issued through the KDB.

99. *Packing list and invoice:* As with all internationally traded goods, exporters are required to provide a detailed invoice and packing list for customs valuation. Although dairy produce from within the EAC region is no longer subject to import duty, this procedure still applies. The packing list must specify batch numbers, packing dates, expiry dates, and other key information needed to match the goods against the quality test results.

100. *Import declaration form:* The IDF is a simple customs document that the importer must fill out and submit to the clearing agent to use during border procedures. The IDF will contain information on the exporter, importer, type of product, packing date, expiry date, batch number, and other information needed to identify the product and trace its compliance with customs and standards requirements.

101. *Clearance certificate:* This document is issued by the importing country's dairy authority as final proof that the consignment meets all trade requirements. It is used to facilitate border procedures. Dairy imports to Kenya from outside the EAC region are subject to a 7% KDB levy on top of normal customs duty.

Transport and movement across borders

102. Once all required documents have been compiled, international transport and border crossings are the next stage in the transaction. UHT milk and dry milk powder do not require refrigeration so, in many ways, are the best-suited dairy products for international trade and are usually shipped by road. Yoghurt, butter, and cheese, on the other hand, require refrigeration so are much more demanding and expensive to ship. Because of the long transit times by road to some EAC markets (such as Kenyan exports to Rwanda and Burundi), dairy products often go by air. Even for shipments between Kenya and Uganda, airfreight is not unusual.

103. *International transport:* During transit, any number of logistical barriers may arise. The poor quality of roads, risk of police roadblocks including demands to inspect the produce, and excessive use of weighbridges may add time to the journey time and constitute potential threats to regional dairy trade. These constraints, of course, also apply to domestic trade and can have particularly serious consequences for dairy processors because of the extra time taken to move raw milk from the farm into the dairy plant.

104. Although international logistics was not a major focus of investigation, it is worth noting that many of the dairy traders met for this study specifically remarked that the transport situation has improved in recent months. Whereas there were previously 47 police roadblocks on the road between Mombasa and the Malaba border crossing with Uganda, for example, there were said to be only 14 roadblocks at present. Similarly, it was reported Uganda closed all highway weighbridges in October 2009 and that international transporters only need to have their truck weighed once when entering the country. Beyond international dairy trade, these moves are of obvious benefit to other sectors and may be regarded as important steps toward improving the regional trade environment.

105. *Border movement:* In terms of actual border procedures, customs clearance is always handled by a licensed clearing agent or freight forwarded. No major complaints were voiced over this part of the trade process and participants in the system were virtually unanimous in saying that as long as all the paperwork is in order, everything works fine. Sometimes there may be questions over the reported value of a consignment, but with the new 0% tariff on EAC dairy imports this issue has effectively gone away.

106. The one border difficulty described by a dairy importer was the case of Rwanda where formal sector traders said they have sometimes not been able to obtain pre-clearance for their products as spelled out in the official guidelines. Rwandan customs procedures state that all perishable goods are entitled to pre-clearance, but elsewhere include seemingly contradictory guideline, which states that the batch numbers of goods approved for pre-clearance must be identical throughout the entire shipment.

107. Normally, when goods are approved for pre-clearance the trader must go to Rwandan Customs and RBS to collect inspectors from each respective office and take the officers to where the goods will be offloaded. Both officers must be present to break the customs seal. Upon opening the container, Customs and RBS Inspector will check to make sure that all batch numbers, manufacturing dates, etc. match the ones that are recorded on the packing invoice. In cases where pre-clearance cannot be obtained, however, the truck must be offloaded at a bonded customs warehouse (or held at the warehouse and kept running in case of refrigerated transport) while samples of the produce are taken to RBS for conformity analysis.

Market surveillance

108. As shown in Figure 7 the final step in the trade process is market surveillance. As a matter of routine business, national bureaus of standards are meant to draw samples of imported and domestic produce from store shelves and take the product for testing to ensure compliance with standards. Consistent with the agreed principle between EAC countries of mutual recognition of each country's national quality seal, laboratory tests should not be required for entry. Instead, the only stage that additional tests should be carried out is during market surveillance when domestic and imported products are tested alike.

109. In actual practice, however, the preceding discussion shows that laboratory testing and other kinds of SPS analysis are almost always required for dairy products to gain entry to another EAC country. Quality certificates with matching batch numbers for the produce being traded must be presented regardless of the agreement to recognize each country's national quality mark. Because domestic produce can be sold without further testing, this practice is a significant disadvantage to dairy importers. Efforts to streamline the quality verification process, therefore, could have considerable impact on the costs of regional trade and opportunities for trade expansion.

V. POLICY AND PROJECT INTERVENTIONS

110. This section provides a brief overview of project interventions and donor support for dairy. As described, dairy production in the EAC region is overwhelmingly dominated by smallholder farmers and this creates a number of unique challenges for involving producers in formal supply chains at the domestic and international levels.

Support for Dairy Development

111. Broadly speaking, most dairy sector policies and project interventions in the EAC region have been guided by a view that equates dairy sector competitiveness with modern value chain development. Until recently, small-scale milk traders who account for over 80% of total milk trade were largely overlooked in planning project strategies and were effectively regarded as something that needed to be stamped out to make room for improved linkages with modern dairy processors. While this negative view of small-scale traders has since moderated as result of policy dialogue with donor projects and other changes that came with market liberalization, small-scale milk traders continue to be regarded by many in the EAC region as a transitional part of the dairy landscape only.

112. Consistent with this view, dairy projects have traditionally focused their efforts on improving linkages between small farmers and formal dairy processors. Through comprehensive kinds value chain support, for example, USAID has supported various interventions through Land O'Lakes, TechnoServe, World Wide Sires, and other development organizations aimed at making smallholder linkages with commercial processors more reliable. While these projects have not always included a specific focus on international trade, the emphasis on formal sector marketing and processor improvements is highly relevant to the trade agenda.

113. Because of the preference of most consumers in East Africa for low cost raw milk, a major challenge for value chain projects has been to make formal sector dairying more attractive. Dairy processors throughout the EAC region have so far been unable (or unwilling) to pay price premiums that would reward a farmer's investment in quality and various kinds of project support have been needed to promote the upgrades needed for formal sector marketing instead. Among other things this has meant showing farmers the financial benefits of improved silage making and better livestock care, training of farmers in animal husbandry and milk hygiene, establishment of artificial insemination (AI) service points, and work with dairy producer groups to identify market outlets and negotiate reliable supply contracts with dairy processors.

114. Bulking centers have been an obvious focal point for this work with various project investments in the rehabilitation of milk cooling tanks, purchase of hygienic dairy equipment, provision of business management training, and other improvements needed to make formal sector marketing possible and attractive. Further along the value chain at the dairy processing stage, the focus has been on generic dairy promotions to build consumer demand, new product development as a strategy for improved competitiveness, and introduction of HACCP-based quality control systems to ensure that routine platform tests, hygienic handling, and timely delivery are observed.

115. In 2008, the Gates Foundation launched East Africa Dairy Development (EADD) Project, which is a 10-year initiative that started with a 4-year pilot worth USD 42 million

that covers Kenya, Uganda, and Rwanda.¹⁹ EADD is following a so-called “milk hub” approach, which focuses on bulking centers as the nexus of development and market linkages with dairy processors. Unlike general value chain development, priority is not given to processor upgrading or generic dairy promotions. Instead, the milk hub approach focuses attention on bulking centers as a business enterprise and provider of services needed to support dairy production. Although it is too early to draw conclusions on the effectiveness of this approach, the idea is to promote stable buyer linkages that attract farmers because of the services offered by the hub. This, in turn, allows the hub to build relations with dairy processors and realize other benefits including the ability to mobilize private finance for investments in cooling tanks and other infrastructure needed for formal sector dairying.

116. Parallel to these efforts, there has been a significant change of policy in Kenya (and to a lesser extent in Uganda), to endorse small-scale milk traders. These so-called informal markets account for over 80% of total dairy sales in each country and are highly relevant to

Box 7: Endorsement of Small-Scale Milk Trade in Kenya

In December 2003, the Kenya Dairy Processors Association (KDPA), a coalition of large milk processors and TetraPak launched a high profile “Safe Milk Campaign” against the informal sector. A key message of the campaign was that the consumption of raw milk was dangerous because of milk adulteration by informal traders and vendors. Informal milk traders were portrayed as criminals who added potentially dangerous substances to boost their profits. Processors said their objective was to warn consumers about the potential health risks of consuming raw milk, but it was widely perceived that true objective was to stamp out the informal sector with which large processors could not compete. The campaign was planned and funded by the private companies, but was officially sponsored by the KDB and Ministry of Health. USAID funds were also used to support the campaign as part of a dairy promotions effort by Land O’Lakes.

With the negative portrayal of small-scale traders, the health campaign soon gave rise to what became known as the “Milk War” in which newspapers and radios were full of various claims and counter-claims about the safety of raw milk and importance of small-scale milk trade to the rural and urban poor. With support from the DfID-funded Smallholder Dairy (Research and Development) Project (SDP), civil society partners became organized and argued that the claims against the informal sector were exaggerated and likely to reduce overall milk consumption with potentially devastating consequences for hundreds of thousands of farmers and traders who depended on informal milk trade. Rather than try to force small-scale milk vendors out of business, the SDP project partners argued that there was an urgent need to engage with the informal sector because of its substantial role in milk marketing and importance to poverty reduction.

As a result of the public debates and ongoing research under the SDP a gradual shift in government’s policy toward the small-scale sector began to take shape from mid-2004. This began with a significant relaxing in how the laws against informal trade were implemented and was followed in 2006 by presentation of a new Dairy Policy and Dairy Bill for stakeholder consultation. The new policy explicitly recognizes the valuable role of small-scale milk traders and includes innovative features to facilitate the transformation of informal milk trade towards formal standards through the promotion of appropriate technologies, training on safe milk handling, and establishment of a dealer certification system as a new concept in milk hygiene. Under the new system, milk traders and outlets that complete a KDB approved training course may be certified then licensed as suitable for raw milk handling. In turn, licensed premises are branded by the KDB and promoted through various media campaigns and dairy road shows. (Source: Leksmono et al. 2006)

¹⁹ After a four year pilot phase from 2008-2012, EADD is expected to add 2-3 countries during the implementation phase from 2013-2018.

the rural and urban poor because of more favorable pricing compared with formal sector channels (see Box 7 on the previous page).

117. In support of the new policy, the DfID-financed Improving Quality Assurance in Milk Markets (IQAM) Project, worked together with the KDB, International Livestock Research Institute (ILRI) and Kenyan NGO, SITE to develop and test service delivery mechanisms for quality assurance in “warm milk” value chains. The IQAM project developed a training program that generated a group of private sector trainers who have the capacity to deliver training on quality assurance to informal dairy traders leading to formal certification as a requirement for KDB licensing. At this level, the majority of traders do not use any form of cooling and instead aim for quick and efficient delivery to the final consumer.

118. In Uganda, a similar policy of licensing small-scale milk traders applies. In this case, however, most milk is produced in the southwest region of the country so has longer delivery time going into Kampala compared with most supplies into Nairobi. For this and other reasons, the Uganda DDA banned the use of plastic containers in 2002, and in 2006 introduced a law that requires all dairy traders to use chilling equipment and insulated tankers except for local trade within the immediate farm area. In Kenya, plastic containers are still allowed and milk may be carried on highways in metal cans rather than by insulated tanker.

119. In Rwanda, recent development efforts for dairy have primarily revolved around the Dairy Cattle Support Project (PADEBL) implemented by Government with funding from AfDB since 2001. PADEBL is structured around several components that include farmer outreach and extension, intensification of cattle breeding, veterinary services, promotion of livestock products, and capacity building. Inherent to the project concept is Government’s ongoing plan to provide every poor household a dairy cow. Other than local breeding with AI, large numbers of improved livestock are being imported from South Africa and Europe for distribution to poor farmers who complete a training program in animal health and nutrition. Livestock recipients are meant to pass-on their first female calf to a neighbor to extend the benefits of the program and achieve wider coverage. Land O’Lakes and EADD have also been active in Rwanda since 2007 and 2008 respectively.

120. While the investments made through PADEBL and by other donor projects have led to a sharp increase in total milk production, commercial marketing is likely to remain a significant challenge to Rwanda. Producing milk for subsistence purposes and local trade is very different from producing for formal markets. PADEBL administrators say the farmer training work does not emphasized milk hygiene and without good on-farm quality control, dairy processors will struggle to obtain the kind of supplies they need. PADEBL and private investors are working together to establish new milk collection centers, but without understanding of the requirements for hygienic milking from the very beginning it will be very difficult for Rwanda to amass the kind of milk supplies it needs, particularly with regard to exports for which the EAC dairy standards set demanding upper limits on microbiological growth.

Support for Trade Enhancement

121. In terms of support for regional dairy trade, project strategies have focused squarely on formal sector priorities. While this approach may appear consistent with the need to develop long-term market outlets through export development, there is an inherent risk that new legal requirements and policies driven by the trade agenda alone may contradict other priorities at the domestic level. Little consideration, for example, has been given how international

policies might affect domestic market opportunities where up to 95% of traded milk in some countries is sold by small-scale milk vendors. Finding the right balance in how to approach regional standards questions and other trade policies, therefore, can be a major challenge, not only for dairy projects but also for national and regional policymakers as well.

122. Thus far, the most significant donor intervention focused on regional dairy trade was the USAID-funded Regional trade Expansion Program (RATES). The RATES project was operational from 2002 to 2008 and had the primary goal of increasing the value of agricultural trade within the East and Southern Africa region and between the region and the rest of the world for dairy, specialty coffee, maize and pulses, and cotton/textiles. In the dairy sector, RATES undertook a study of regional trade in 2004 that made numerous recommendations concerning (i) elimination of import controls and restrictions; (ii) reduction of tariff and non-tariff charges; (iii) harmonization of product quality standards; (iv) strengthening of sanitary requirements and food safety standards; (v) simplification of documentation and customs procedures; and (vi) various strategies for exploiting regional market potential and integration of informal milk traders to formal value chains.²⁰

123. Based on this report, RATES began work in 2005 with Land O'Lakes the EAC Secretariat to develop a set of harmonized dairy standards for the EAC dairy trade that was later expanded to include COMESA countries as well. The COMESA/East Africa Standards set out exact specifications for packaging, labeling, product composition, composition of raw ingredients, microbiological limits, and restrictions on pesticide residues, veterinary drug residues, heavy metals, and other contaminants together with the required procedures for testing each quality characteristic in accordance with specific Codex Alimentarius and ISO guidelines. Products covered by the regional standards agreements are (i) raw cow milk; (ii) pasteurized milk; (iii) butter; (iv) dairy ices and ice cream; (v) yoghurt; (vi) sweetened condensed milk; (vii) UHT milk; and (viii) milk powders and cream powders.²¹

124. During negotiation of the regional standards, RATES and Land O'Lakes also worked together to establish the East and Southern Africa Dairy Association (ESADA) to represent private sector interests. ESADA is composed of large dairy processors throughout the East and Southern Africa region. It provides a venue for commercial processors to discuss current issues related to trade requirements and regional marketing. Each year ESADA hosts a regional dairy conference and exhibition and provides training to its members through Land O'Lakes in dairy product quality, health, and safety.

²⁰ RATES, 2004.

²¹ COMESA, 2007a, 2007b, 2007c, 2007d, 2007e, 2007f, 2007g, 2007h.

VI. ANALYSIS OF EAC DAIRY STANDARDS

Origin of EAC Dairy Standards

125. Standards serve a multiplicity of functions and their effectiveness depends on the degree to which they are designed and implemented to meet these functions. Dairy standards are set to safeguard public health and to coordinate market actor's behavior and to communicate the nature of the product to the consumer. In most economies, the private sector and consumers alike acknowledge the need for dairy standards. The big question is which standards? The EAC, working with the donor community, has chosen to harmonize its standards with international ones. This choice is not obvious. In this context, harmonization means (i) setting identical standards across the EAC Partner States; (ii) import of standards designed for the dairy industries of developed countries. This section will provide a critical assessment of the motivations behind, the process through which and the formulation of the recently designed harmonized EAC dairy standards. Given the topic of this report, the evaluation will be done mainly from a trade perspective, but it should be emphasized that dairy standards are intrinsically linked to issue of domestic economic efficiency and public health as well.

126. The harmonized EAC standards have been formulated within a regional trade liberalization context as witnessed by the quote below:

“A pre-requisite for increasing intra-regional trade is rationalization of policies, procedures, regulations, rules, standards and grade that govern the dairy sub-sectors in individual countries and their harmonization between countries. The process of rationalisation and harmonization will contribute to creating an enabling institutional environment for dairy markets in the region.” RATES (2004: 2)

127. The quote is from a major policy paper by the USAID-funded Regional Agricultural Trade Expansion Support Program (RATES) in Nairobi. This program later funded the EAC dairy standards harmonization program. The policy paper is the main justification of the harmonization program that the consultants have been able to identify. As witnessed above, the paper exhibits a strong belief in the existence of trade barriers in the field of dairy standards. However, regarding any future work on dairy standards, the report also attempts to set the context for such work:

“The challenge of rationalization and harmonization of policies therefore requires a critical look at both the relevant technical and economic issues by informed stakeholders at all levels, and a keen awareness that optimal outcomes must be based on tradeoffs between the technical issues and the economic interests of the stakeholders. In addition, an important underlying consideration is the ability of individual countries to effectively implement/enforce the agreed on standards ... [A]n important issue for the dairy markets in COMESA and EAC region is to commonly adopt standards that do not unnecessarily hurt domestic and regional markets, especially where there are insignificant exports outside a region and/or where sanitary conditions are similar.” (RATES (2004:2)

128. The policy paper continues to identify constraints to regional trade within COMESA and the EAC. The paper identifies a number of divergences between product standards and

sanitary requirements across different countries in the EAC and in COMESA. On this basis the paper makes a number of policy recommendations in the field of standards. Most importantly, the paper recommends that both product standards and sanitary requirements should be harmonized as well as the testing methods that are used to ensure compliance and the associated implementation procedures.

129. The policy paper makes no effort in trying to document any negative effects on trade from the divergent standards identified. This is rather surprising, especially giving the quote above where the authors acknowledge the need to carefully design “optimal outcomes” (in this case standards) weighing technical and economic interests. Nor does the paper, or subsequent policy work, make an attempt to evaluate the gap in implementation capacity.

130. The policy recommendations of the report were supported by the USAID-funded RATES program with the involvement of Land O’Lakes based in Nairobi. Land O’Lakes worked with the newly created Eastern and Southern Africa Dairy Association (ESADA), set up and funded by RATES, to develop harmonized EAC standards based on international standards.

131. The EAC dairy standards committee held its final meeting in October 2006 recommending the adoption of eight product standards, which are listed in Box 8, and nine testing methods standards. The standards were later adopted as common EAC standards and COMESA is currently in the process of setting harmonized COMESA standards on the basis of the EAC ones.

Box 8: Harmonized EAC dairy standards

EAS 22: Butter

EAS 27: UHT milk

EAS 33: Yoghurt

EAS 49: Powdered milk

EAS 67: Raw milk

EAS 69: Pasteurized milk

EAS 70: Dairy ices and ice cream

EAS 87: Sweetened and condensed milk

132. The harmonized EAC standards are largely based on international Codex Alimentarius standards. RATES supported the harmonization process through a trade specialist within the program itself and through a dairy technologist employed at Land O’Lakes. RATES funded a number of regional and national workshops to discuss the standards and to allow stakeholders to provide inputs into the standard setting process. No publically available minutes exist from the meetings, but the consultants have discussed the standard setting process with key persons involved. These in-depth interviews have uncovered a series of key aspects of the standard-setting process:

- The process was driven mainly by the donor and by the technical agencies involved such as bureaus of standards;
- Private sector inputs were relatively limited during the process although some of the larger dairies in East Africa participated in some meetings;
- Some countries participated in the standard setting process without good knowledge about the quality of their own milk and the challenges they would face in quality upgrading;
- The standard setting process was fast, approximately one year, this appears especially rapid given the status of knowledge and the wide range of product

standards harmonized across the entire sector in five different countries (to be extended to the entire COMESA regions);

- The standard-setting process mainly involved technologists. No assessment of economic and/or wider social impacts was made.

Justification of EAC Dairy Standards

Public health

133. Public health is a major motivation behind dairy standards. Milk and milk products may cause harm if the microbial quality is poor and if zoonoses, diseases transferred from animals to humans, are present. A study by the Smallholder Dairy Project analyses public health issues in EAC dairy consumption (Omore et al. 2005).

134. Omore et al. (2005) study the health risks of consuming Kenyan milk. They demonstrate that the microbial quality is generally poor and exceed the newly set EAC standards by a large margin. The EAC standard for raw milk sets three qualities of milk with class C/III milk being the lowest quality. For this class total bacterial count may not exceed 2,000,000 colony-forming units (cfu) per milliliter (ml) and the milk may not contain more than 50,000 cfu per ml of coliforms. The total bacterial count is mainly a function of storage temperature and time elapsed, while the coliform count indicates the level of hygiene, since coliforms are microorganisms of faecal origin.

135. Most milk analyzed exceed the limit set for total bacterial count by a large margin. The reasons are tropical temperatures, long distances and lack of cooling technology. Milk fresh from the udder contains very low bacterial counts (less than 1000 cfu/ml), but the environment where milking is done, the equipment used and often poor hygiene quickly changes this. This is clearly seen in table 4.

136. Bacterial numbers are higher the further away from the production center the milk is tested. In all samples, apart from in rural Nakuru (very close to the milking) the total bacterial counts exceed the EAC raw milk standard by a wide margin.

137. Pasteurized milk also has difficulties complying with EAC standards. The EAC standard stipulates that pasteurized milk should have a total bacterial count of less than 30,000 and a coliforms count of less than 10. Over half of pasteurized milk samples failed to meet the standard. In Nairobi, 82% and 59%, respectively, had total bacterial and coliforms count above the standard. A substantial number of samples recorded total counts above 1 million cfu/ml.

Table 4. Average bacterial counts in Kenyan milk samples

	Total bacterial count	Coliform bacterial count
Farmer group	7,900,000	15,000
Average	39,800,000	50,000
Nairobi	316,000,000	50,000
Urban Nakuru	20,000,000	20,000
Rural Nakuru	1,300,000	1,000

Source: Omore et al. (2005)

138. The consumption habits of EAC consumers prevent the low quality of the milk from becoming a health risk. All sampled urban households boiled milk (raw or pasteurized) before consumption as did 96% of rural households. The widespread practice of boiling milk reduces the public health risks from bacterial pathogens to very low levels (Omore et al. 2005).

Trade standards

139. Quality is a major issue in dairying not only for public health reasons but also to control economic parameters like shelf-life. Any market actor will need to manage quality issues and in East Africa all dairies have a quality management system. The nature and effectiveness of the quality management system varies greatly depending on the capacities of the company and the end market it serves. Some will have a very rudimentary system and experience frequent problems with shelf life and inconsistent quality of their products, while others have much more modern systems which allow them to serve the high end market.

140. Standards play a role in this system of private quality control. The companies will operate with their own quality requirements which may or may not be aligned with formal standards such as standards set by national bureaus of standards. It is important that we distinguish between such private requirements often determined internally in a company to optimize its production process and marketing opportunities and the ones coming from outside the company, such as EAC standards. A company has no use of unrealistic standards that, if they chose to comply with them, force it to produce products of a quality for which there is no market. This is why private sector consultations are very important when developing formal standards.

141. A company may benefit from trade standards. Trade standards serve important functions both in domestic and international exchange. They transfer knowledge to market participants about the key parameters of the product they are exchanging. The variability inherent in dairy products necessitates a degree of standardization to allow market participants to choose the dairy products that fit their production process. UHT milk, for instance, necessitates the procurement of raw milk with very low bacterial counts because the milk is for long term storage during which even small bacteria amounts will grow exponentially. Standards also promote market growth as they reassure consumers and traders about the nature of the product exchanged. In this sense, standards make it possible to exploit the benefits of trade like economies of scale and improved and increased product variety.

142. The formation of product quality may happen through private or government actions or both. In the EAC, quality management is mostly a private undertaking. Private dairies do their own testing and set their own quality criteria. Informal traders and consumers interact using informal understanding of what constitute acceptable quality milk as the basis. The public regulations that do exist appear to have a limited influence on the formation of quality criteria for milk and dairy products.

Impact of EAC Dairy Standards

143. The consultants interpret the interviews and the available documentation (e.g. RATES progress reports) as evidence that harmonized EAC dairy standards were set under two assumptions about the role of standards in trade:

- Standards (and implementation procedures) that diverge across countries give rise to trade barriers;
- Harmonization with international standards would eliminate standards-related barriers to trade.

These assumptions were not tested. No studies demonstrate that existing standards and quality perceptions are a major barrier to trade. The concept of harmonization was mixed with quality upgrading. By aligning themselves with developed country standards, the EAC Partner States did much more than simply making trading requirements the same across East Africa. They attempted to rapidly transform an emerging dairy industry primarily based on direct and informal market sales into a developed country state-of-the-art dairying industry. The outcome of the EAC standards harmonization is a set of standards almost identical to international standards. International standards are developed by primarily developed countries to serve the public health requirements of these countries and designed to be implementable in developed-country contexts. The situation in EAC countries is very different.

144. An evaluation of the potential impact of the EAC standards must take into account the realities in East Africa when it comes to regulation. The authorities have a high degree of discretionary power and operate under very complex regulatory frameworks which tend to be updated only very rarely. In this view, the harmonized EAC standards could be seen as yet another layer of regulatory complexity that the authorities will be forced to ignore when determining which elements of the regulatory framework to enforce. The unrealistically low bacterial counts contained in the EAC standards make this a very likely option. The EAC standards for raw and pasteurized milk have been borrowed from developed countries where pasteurization and the use of cool chain technology are widespread and milk is not boiled before consumption. In the EAC context, these standards therefore fail to address public health issues and are unsuited for local market participants. The failure of EAC milk to comply with the standards do not signify a health risk and EAC milk that do comply do not meet the market expectations of consumers and down stream actors in the supply chain and therefore the higher costs of producing according to standards may not be met by an increased willingness to pay.

145. The newly harmonized EAC dairy standards fulfill neither public nor private objectives. If implemented they will make most of the EAC milk production illegal. Little milk will comply with bacteria count limits. Most milk will be so far from compliance that standards serve no purpose in directing the dairy industry towards better performance. The standards are imported from a developed country context. In those countries the standards are the last step in a century-long fight for high quality milk. Dairying in the countries like the US and the EU began when demand increased with urbanization and technological development allowed the introduction of mass production machinery and conservation methods like pasteurization. In the latter half of the 19th century dairying began to grow from an on-farm activity to industry. Standards were used to allow for long distance exchange and to safeguard consumer health. Standards were introduced gradually and represented a codification of existing best practices. In this sense, standards were kept realistic targets that

the industry could aim for²². The harmonized EAC dairy standards overlook the history of the development behind the standards. In the EAC, the industry is supposed to leap frog to a level much beyond current practice. This is unrealistic.

146. Furthermore, the EAC standards are not designed to take into account the key characteristics of EAC milk consumption: raw milk is largely boiled before consumption. The EAC raw milk standard was originally developed for raw milk consumed raw, not boiled. This creates a world of difference regarding public health. The many health problems experienced in other countries as their dairy industries developed in its early stages could have been much reduced had the consumption habits been like the ones observed in the EAC. The consumption habit also reveal the major problem from importing standards made for a different environment: no raw milk standards exist that take into account the consumption habits of EAC consumers.

147. Some proponents of the harmonized EAC dairy standards admit that current dairy quality fall significantly short of the level set in the standards. They argue that this is a short term adjustment problem, and argue further that the industry will have to upgrade in any case. A common reason given for the need to upgrade is the desire to access international export markets beyond EAC countries. This view is problematic for two reasons: first, the strong dominance of small farmers and informal markets is not a short term transitory phenomenon, but a key characteristic of EAC dairy farming that will persists for the many decades. Second, there is a lack of demand for the standards about to be put in place. The public health rationale looks dubious and there is no market demand. Raw milk public health issues are primarily addressed by consumption patterns and the private market has created its own quality levels and associated quality management systems. Both public health and private market coordination can be improved but not by offering essentially irrelevant standards.

148. Finally, the case for using harmonization to support regional trade liberalization is not straight forward. The EAC dairy industry is marked by many problems, and quality is certainly one of them. However, this does not imply that differences in quality standards are a major trading obstacle. Quality is a big capacity building issue, on farms, amongst traders and at the processing level. No studies have been made that compare quality levels across EAC Partner Countries, but anecdotal evidence suggest that the problems are of the same nature as the ones discussed above for Kenyan milk. We neither have little evidence of intra-EAC trade disputes that could have been solved had the standards on each side of the border been harmonized. A Kenyan – Zambian trade conflict over milk imported into Zambia was based on quality concerns. But the concern was not one of different standards but Zambia's worries of low quality of Kenyan milk. Raising the quality of Kenyan milk to satisfy the Zambian will take capacity building in Zambia and will not be resolved by simply upgrading Kenyan standards to a level Kenyan milk cannot comply with.

149. As emphasis above, it is likely that domestic authorities will simply chose to ignore the EAC standards. However, there are two caveats: (i) the standards may bring back the debate about informal sector milk discussed above, in particular in Box 7. In Kenya, informal milk trade has finally been recognized as a vital source of income and a development opportunity for scores of very low income segments of the population (Leksmono et al.

²² For an example of the use of standards and other means to safeguard public health and improve the dairy industry, see the description in Wessel (1984) of the development of the Baltimore milk market in the early part of the 20th century.

2006). Attempts to enforce the new EAC raw milk standards would jeopardize this positive development.

150. From the perspective of this report, the new EAC standards are problematic. The initiative to harmonize standards was done to liberalize trade but the opposite result is more likely. We have no evidence that quality concern were a major border issue before the harmonization process was started. Now, the quality requirements have increased to a level that few if any EAC producers can meet. The increasing attention to quality issues and the new powers from the adoption of the standards may prompt border authorities to stop more trade in the future.

151. The issue of conformity analysis is particularly difficult. Regional experts state that the necessary compliance infrastructure in the form of testing laboratories do not exist currently in the EAC. This makes it impossible to verify full compliance on all agreed terms. To the extent that national bureaus of standards and other bodies continue to approve dairy produce that has not been tested according to the letter of every one of EAC guidelines, therefore, these practices risk undermining the credibility of each organization, not only in the context of EAC dairy trade but in broader international markets for all kinds of products as well.

VII. CONCLUSIONS AND RECOMMENDATIONS

152. The EAC has put focus on the removal of non-tariff barriers in an attempt to avoid a policy reversal after the Partner States courageously have removed tariffs on intra-regional trade. Policy makers are well aware that protectionist interests still exist and will seek new outlets. They fear that tariffs will be replaced by less transparent trade barriers such as administrative procedures, sanitary and phytosanitary measures, and technical barriers to trade. The EAC Partner States have committed themselves to work towards the elimination of NTBs between them. The Partner States are to design a mechanism that identifies and monitors NTBs and have committed themselves to eliminating existing barriers on intra-EAC trade and to avoid erecting new ones.

153. Recent work has tried to establish a base mark for the NTB situation in the EAC. Work by private sector entities in the three founding members focused on establishing inventories of existing barriers. Country specific trade diagnostic studies analyzed barriers as part of general analyses of trade policy. The World Bank (2008) broadened the work by combining desk studies with consultations with Partner State governments and private sector stakeholders. This body of work identified a long list of actual and potential NTBs. The World Bank (2008) concluded that “[i]n the EAC, non-tariff measures – coupled with poor infrastructure, limited human skills capacity and considerable scope for corruption/fraudulent behavior – add to the difficulty and cost of trading goods” (World Bank 2008:59). The quote reflects the general impression one gets from reading available material on NTBs well. In short, the work on one side give the impression that NTBs are numerous, but, on the other, that they are only one impediment to trade that the private sector struggles with while operating in a generally high cost environment. The work identifies many concrete NTBs, but there is considerable variation across sectors and over time.

154. The present report grew from the World Bank (2008) report. The consultants were asked to look specifically on the dairy sector. World Bank (2008) made a specific recommendation on the dairy sector:

“In a few goods, like milk, beef, poultry (including day-old chicks), the EAC may want to develop specific region-wide technical and/or SPS standards after detailed investigations. [...] Any capacity building initiatives in the overall area of the technical and/or SPS standards for goods should be assessed vis-à-vis clear articulated demand from end-users in the public/private sector, rather than from the national bureaus of standards.” (World Bank 2008:60)

155. The present report looks in detail on the question of dairy standards harmonization but also discusses other potential trade barriers. The approach used is a combination of value chain analysis and desk research. The consultants interviewed and collected data from key stakeholders in Kenya, Uganda and Rwanda. The aim is to analyze NTBs in dairy and to make recommendations on present and potential future NTBs. Dairy represents a key and growing high value sector, which is particularly vulnerable to trade barriers as dairy products are highly perishable.

Conclusions

156. The EAC dairy industry is only marginally involved in regional or extra-regional trade. Less than 1% of the regions milk output is exported. Some observers have tended to link the poor trade performance with the existence of trade barriers. The consultants,

however, have not been able to confirm that view. Rather, trade is not happening due to a general shortage of milk. Dairying in all five countries is a domestically focused activity with very large informal sectors and maybe only 10-20% of milk going through formal market chains. Only a small part of the formal dairy output is traded. This configuration of the EAC dairy sector is likely to be an optimal solution to the production and marketing challenges and opportunities faced by the sector. Consumer demand is highly skewed towards low price raw milk that is generally boiled before consumption. Raw milk is not a tradable product due to tropical temperatures and the lack of cooling infrastructure. Trade primarily takes place in milk powder, UHT milk and luxury products such as cheese and yoghurt. The potential for intra-regional trade in these products is still in its infancy as seasonal variation is similar across EAC Partner States and all are normally in a deficit situation. The trade in luxury goods is restricted by the limited size of the middle income class, expatriate societies and the tourism industry.

157. Dairy trade, however, grew strongly during the decade prior to 2008. Total value of exports is USD 55.5 million. Kenya is by far the regions strongest dairy producer and exporters and is responsible for 86% of the total. The ranking after Kenya is Uganda (9%), Tanzania (4%), Rwanda (1%) and Burundi (0.3%). Contrary to the evidence found in the more aggregate studies discussed above, the consultants found that market participants were generally happy with the flow of trade. The majority of private market actors interviewed stated that they did not experience major problems with non-tariff barriers. A sizeable portion of these said that trade had become much easier over the latest years. Trade remains burdened by frictional costs which traders consider an unnecessary nuisance although the aggregate costs of these were generally believed to be small.

158. A couple of caveats should accommodate the views of the private market participants: (i) considerable efforts have been made lately to keep NTBs down and the market participants are experiencing the fruits of these efforts now. The dairy regulatory authorities, for instance, meet regularly in an attempt to liberalize trade. Yet, constant pressure is needed to keep trade flows open, in particular now when tariffs are gone. The views expressed by the market participants were also given in a context of a regional drought which have affected milk output severely. When milk production is down, protectionist pressures tend to diminish as prices are high and everyone is looking for products to sell including through imports. One exporter expressed the view that the situation might change if the rains improved. (ii) There may be a selection bias in the group of people interviewed. The interviews were mainly done with larger, established companies which knows how the political economy works and who have learned (and have the political support) to work inside the system. (iii) Market participants may not themselves have a good idea of the total economic costs of frictional costs. Private market operators in general do not worry about things they cannot change and tend to ignore costs they deem necessary to stay in business. It may well be that the total frictional costs is a significant burden to the industry and that the existence of these split up markets, concentrate industry and prevent innovation. Companies interviewed may not realize this as they only focus on their out-of-pocket costs, and cannot observe the general costs of an inefficient industry.

159. Policy work must therefore be focused on future developments and the need to keep markets open to allow for a more dynamic trade-oriented dairy sector to emerge. The gains already achieved should be clearly recognized in any future activities. Great care must be taken to avoid duplicate or repetitive work. Some stakeholders clearly expressed donor fatigue and rightly worried that new initiatives would attempt to replace rather than built on

existing successful initiatives such as the meetings of the East African Dairy Regulatory Authorities Council or reforms of customs procedures. The success of existing institutions to address NTB issues, and the private sectors acknowledgement of this, is extremely encouraging.

160. Nevertheless, trade conflicts still occur. In the future, protectionist interests may find many opportunities in the East African trading regulations which still leave room for improvement. Unfortunately, the recently harmonized EAC dairy standards are a major issue of concern. EAC standards have been harmonized in an attempt to remove imaginary trade barriers. The World Bank (2008) report recommended that harmonized standards should be assessed vis-à-vis demand from end users, that is, according to market demand or public health issues. This has clearly not taken place.

161. In theory, trade barriers could be caused by having different regulations on each side of the border. There is little evidence of the existence of such trade barriers between EAC Partner States. In reality, the most important effect is not the harmonization of standards *per se*, but the raising of the quality aimed for to an unrealistic level. If the standards are implemented, most milk in the EAC will be technically illegal. Domestically, this will have little practical impact as the standards are highly unlikely to be implemented. The standards are unrealistic in the EAC dairy industry and broad based implementation attempts will meet strong resistance from the industry. The trade aspects may be serious: in the future, most EAC dairy products can be denied entry with reference to the harmonized EAC standards. Protectionist interests have gained yet an excuse to refuse imports.

162. Other areas of concerns exist too. The EAC has agreed that each country's national quality seal should be accepted as sufficient and routine proof of conformity with regional standards. National bureaus of standards nevertheless still demand additional testing. This is costly in terms of money and waiting time. The EADRAC has drawn up a compromise that testing only has to be done on one side of the border. The compromise appears to be implemented at the time of writing. The compromise falls short of the officially agreed principle and, while an improvement, is an example of the considerable distance between rules and practice that can often be observed.

163. Market participants also complain that veterinary licenses have to be issued for each individual consignment. For established firms, it would make more sense to issue such licenses for an extended period of time like annually. This will both benefit trade and free up resources from monitoring traders with a good reputation.

Recommendations

164. The EADRAC is well positioned to take the lead in removing a large number of obstacles of a red tape nature. Many issues will require the collaboration of other agencies in the five Partner States, but the dairy authorities have the necessary overview and the technical knowledge to coordinate efforts. The role of donors is uncertain as many changes may not require intensive financial or human resource assistance but depend on willingness to change with the agencies responsible. Donors should however be willing to assist if needs are identified. The financial resources for regional integration efforts are plentiful for the moment with major activities being implemented by, amongst others, USAID and DfID.

165. The EADRAC could focus on implementing the already agreed principle of mutual recognition of quality marks. The licensing system should also be reviewed and discussed. A

system based on annual licenses would be a good idea. The licensing system could also be made electronic or internet-based. The actual value of the current system is mainly for registration purposes which could be fulfilled by an electronic system.

166. The newly harmonized EAC dairy standards will not serve the industry well. Currently these standards are not implemented. If implemented, the standards may hurt the dominant and economically important informal sector as well as stop regional trade. The standards should be reviewed according with the recommendation already given in the World Bank (2008) report. If a review demonstrates that the standards do not meet public health or market demands they should be withdrawn.

167. If a public health and/or market demand is established for another set of standards these could be developed with the assistance of donors and international organizations. FAO and the WHO could be consulted on the development of a standard for the unique product of the region: raw milk destined to be boiled before consumption. The implementation and conformity assessment procedures should be in accordance with the realities in the EAC region.

168. The policy process that led to the adoption of the harmonized EAC standards needs to be improved. EAC Partner States face many new demands for regulations such as food safety, animal health, and environmental protection. It is important that new issues are addressed in ways in line with the needs and capacities of the EAC region. EAC Partner States and the donors that support them should avoid importing policy measures designed for OECD countries without adjusting them to the realities in East Africa. In OECD countries Regulatory Impact Analysis (RIA) is being used increasingly to improve the knowledge base of policy makers. RIA considers economic and social factors that need to be explicitly considered when designing policy initiatives. RIA is a relatively new concept in developing countries (Jacobs 2006). The use of RIA to document the economic and social impact should be considered in the EAC to fully comprehend the consequences of measures affecting trade. Donors and international organizations with analytical expertise, like the World Bank, would need to support the development of a type of RIA suitable for East Africa.

169. South-South cooperation should be encouraged. The study of policy interventions in EAC dairying has revealed attempts to learn from some of the most advanced dairying industries of the world such as the US one. The value of this is doubtful. Many Southern countries have dairy industries that operate better than the EAC one and under more similar conditions regarding production, trade, processing and consumption. India, for instance, has achieved phenomenal growth in dairy while relying on smallholders. There are many lessons to be learned from such experiences.

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Appendix 1:

The MAST Classification of NTMs

Classification of Non-Tariff Measures (version June 2008)

A000	SANITARY PHYTOSANITARY MEASURES	AND	<i>Sanitary and phytosanitary measures include laws, decrees, regulations, requirement, standards and procedures to protect human, animal or plant life or health.</i>
A100	<i>Voluntary standards</i>		<i>Rules, guidelines or characteristics for products or processes and production methods, which are designed to protect human, animal and plant health and life.(e.g. composition, quality and hygiene), approved by recognized bodies at international, national or sub-national levels, or those set established by private companies. Voluntary standards do not have the authority of law.</i>
A110	International Standards		<i>Standards developed by international standards organizations. By definition, international standards are suitable for universal, worldwide use.</i>
A111	Production Process standards		<i>Standards defining processes for the production chain that will contribute to the safety and suitability of products.</i>
A112	Product characteristics standards		<i>Standards defining the characteristics requested for products (e.g. size, colour, composition and quality) and contribute to the safety and suitability of products.</i>
A119	International Standards, n.e.s.		
A120	National Standards		<i>In general, each country or economy has a single recognized Standards Body (NSB). SPS allows countries to set their own standards which must be based on science. Applications of these rules must be limited to the extent necessary to protect human, animal or plant life or health. These rules should not be used arbitrarily or unjustifiably to discriminate between countries where identical or similar conditions prevail.</i>
A121	Production process standards		<i>Standards defining processes for the production chain that will contribute to the safety and suitability of products</i>
A122	Product characteristics standards		<i>These will rule the characteristics requested for products (e.g. size, colour, composition and quality) and will contribute to the safety and suitability of products.</i>
A129	National Standards, n.e.s.		

A130 Subnational Standards	<i>Standards that may be imposed by a state or region within a country imposing extra requirements beyond national standards.</i>
A131 Production process standards	<i>Standards defining processes for the production chain that will contribute to the safety and suitability of products.</i>
A132 Product characteristics standards	<i>Standards defining the characteristics requested for products (e.g. size, colour, composition and quality) and contribute to the safety and suitability of products.</i>
A139 Sub-national Standards, n.e.s.	
A140 Private Standards*	<i>Standards demanded by private entities, such as organizations representing supermarket chains and other bodies. (e.g. pesticide regulations, traceability and general hygiene of foodstuffs).</i>
A200 Sanitary and phytosanitary regulations	<i>Sanitary and phytosanitary regulations include laws, decrees, requirements and procedures to protect human, animal or plant life or health. Compliance is mandatory.</i>
A210 Labelling, Marking and Packaging requirements	<i>Measures regulating the kind, colour and size of printing on consumer packages and labels and defining the information that may or should be provided to the consumer which is directly related to food safety.</i>
A211 Labelling requirements	<i>Labelling is any written, electronic, or graphic communication on the consumer packaging or on a separate but associated label.</i>
A212 Marking requirements	<i>Measures defining the information for transport and customs, that the transport/distribution packaging of goods should carry, which are directly related to food safety.</i>
A213 Packaging requirements	<i>Measures regulating the mode in which goods must be or cannot be packed, in conformity with the importing country handling equipment or for other reasons, and defining the packaging materials to be used, which is directly related to food safety.</i>
A220 Traceability requirements	<i>Traceability is the disclosure of information regarding the origin of live animals and animal products as well as for agricultural products, including product processing history, and the distribution and location of the product after delivery. It aims to track through all phases of production and distribution.</i>
A221 Origin of materials and parts	<i>Description of geographical origin of</i>

A222 Processing history	<i>animals, plants and their derivative products.</i>
A223 Distribution and location of products after delivery	<i>Description of all stages of production</i>
A229 Traceability requirements, n.e.s.	<i>Description of transport, handling and storage of products after the production is finished.</i>
A230 Tolerance limits for residues and contaminants, or restricted use of certain substances	<i>Maximum concentration of residue levels permitted (MRLs) on food, feed, wood, plants etc., or restriction on the use of certain substances as ingredients.</i>
A231 Tolerance limits for residues of or contamination by certain substances in foods and feeds	<i>Maximum Residue Limits (MRL) for toxic and other harmful substances and contaminants that enter the product during the production and/or distribution processes (e.g. insecticides, heavy metals, POPs and chemicals generated during processing such as acryl amide).</i>
A232 Restricted use of certain substances in foods and feeds	<i>Restriction on the use of certain substances as ingredients, which are therefore reasonably expected to exist in the final product. As a result, their specification is also important to prevent the risks arising from their use.</i>
A240 Regulation of foods or feeds derived from, or produced using genetically modified organisms (GMO)	<i>These regulations may include labeling and authorization requirement or outright prohibition.</i>
A250 Hygienic requirement	<i>Restrictions to avoid contamination by microorganisms and parasites in foods and feeds that cover production, manufacturing, transport and storage conditions. Includes post-harvest treatment and pathogen controls.</i>
A260 Disease prevention measures	<i>Measures to protect animals, humans and plants from any infectious/contagious diseases. Covers restrictions other than quarantine requirements. Measures included in this category are typically more of an ad-hoc and time-bound nature.</i>
A261 Restriction/prohibition in case of outbreak of infectious diseases	<i>Requirement to quarantine imports for a certain period. It is not a prohibitive measure. Quarantine supposes also quarantine fees, inspection fees, veterinary fees, boarding, fumigation etc.</i>
A262 Quarantine requirement	<i>This group of entries registers safety regulations relating to the production process (such as for example HACCP). It covers primary production (plant & animals) and processing. National regulations that provide that only foods produced under certain code of practices can be accepted for</i>
A270 Regulations on productions processes	

	<i>sale are also included.</i>
A271 Plant growth processes	
A272 Animal raising or catching processes	
A273 Food and feed processing, including storage and transport	
A279 Regulations on productions processes, n.e.s.	
A280 Geographical restrictions	<i>Prohibition on imports of specified products from countries or regions due to presence of phytosanitary hazards (e.g. insects, mites, plant pathogens).</i>
A290 Sanitary and Phytosanitary regulations, n.e.s.	
A300 Conformity assessment related to SPS	<i>Control, inspection and approval procedure, including procedures for sampling, testing and inspection, evaluation, verification and assurance of conformity; and accreditation and approval.</i>
A310 Certification requirement	<i>Certification requirements either in the exporting or importing country</i>
A311 Certification by government agencies of the countries of origin	<i>Requirement to obtain certifications from the exporting country.</i>
A312 Certification by local agencies in the destination market	<i>Requirement to obtain certifications from the importing country.</i>
A320 Lack of recognition	<i>Certifications issued by a country or authority are not recognized by the importing country.</i>
A321 Lack of acceptance of internationally recognized accredited conformity assessment bodies	<i>International certifications are not recognized by the importing country.</i>
A322 Lack of acceptance of certificates of conformity assessment bodies issued in the country of origin	<i>Certifications from exporters are not recognized by the importing country.</i>
A323 Lack of acceptance of Self Declaration of Conformity (SDoC)	<i>SDoC: procedure by which a supplier provides a written assurance that a product conforms to specified requirements</i>
A329 Lack of recognition, n.e.s.	
A330 Testing requirement	<i>Includes sampling requirement and are usually associated to testing or laboratory fees.</i>
A340 Inspection and clearance requirement	<i>Imports require inspection and/or clearance to be accepted. Inspection can be done by public or private entities.</i>
A350 Registration requirement	<i>Importers may need to be registered in the importing country. It is often the case for sensitive products such as medicines and/drugs. Exporters need to contact a registered importer.</i>

A360 Repetition in destination market of identical tests for same or equivalent regulations

A370 Translation requirement for reports or certificates

A380 Requirement to pass through specified entry point or customs

A390 Conformity assessment related to SPS, n.e.s.

A900 Sanitary and phytosanitary measures, n.e.s

For a given regulation, a same test must be performed within a destination country at national, regional and/or local entry points

Documents must be translated to the language of the destination countries

Certain goods must be cleared at a specific entry point within a destination country for availability of testing or inspection facility

B000 TECHNICAL BARRIERS TO TRADE

Technical barriers to trade (TBT) are regulations/standards referring to technical specification of products and conformity assessment systems thereof.

B100 Voluntary standards

Rules, guidelines or characteristics for products or processes and production methods (e.g. size, colour, composition, quality, security and safety), approved by a recognized bodies at international, national or sub-national levels, or those established by private companies. Compliance is not mandatory as voluntary standards do not have the authority of law.

B110 International Standards

Are standards developed by international standards organizations? By definition, international standards are suitable for universal, worldwide use.

B111 Production Process standards

Standards defining processes for the production chain that will contribute to the security, safety and suitability of products.

B112 Product characteristics standards

Standards defining the characteristics requested for products (e.g. size, colour, components and quality) and contribute to the security, safety and suitability of products. Also includes those related to product performance.

B113 Management system standards

Standards that provide requirements or give guidance on good management practice, establishing a framework on production (e.g. the quality system of a manufacturing business might include looking at more efficient manufacturing processes or speeding up distribution).

B119 International Standards, n.e.s.

B120 National Standards

Technical standards to be applied at National Level regulating product technical

B121 Production process standards	<i>characteristics and production processes</i> <i>Standards defining processes for the production chain that will contribute to the security, safety and suitability of products.</i>
B122 Product characteristics standards	<i>Standards defining the characteristics requested for products (e.g. size, colour, components and quality) and contribute to the security, safety and suitability of products. Also includes those related to product performance.</i>
B129 National Standards, n.e.s. B130 Subnational Standards	<i>Standards that may be imposed by a state or region within a country imposing extra requirements beyond national standards.</i>
B131 Production process standards	<i>Standards defining processes for the production chain that will contribute to the security, safety and suitability of products.</i>
B132 Product characteristics standards	<i>Standards defining the characteristics requested for products (e.g. size, colour, components and quality) and contribute to the security, safety and suitability of products. Also includes those related to product performance.</i>
B139 Subnational Standards, n.e.s. B140 Private Standards*	<i>Standards demanded by non-governmental bodies, such as private companies (e.g. computer software standards or electric appliances).</i>
B200 Technical regulations B210 Labelling, Marking and Packaging requirements B211 Labelling requirements	<i>Measures regulating the kind, colour and size of printing on packages and labels and defining the information that may or should be provided to the consumer. Labeling is any written, electronic, or graphic communication on the packaging or on a separate but associated label, or on the product itself.</i>
B212 Marking requirements	<i>Measures defining the information for transport and customs, that the transport/distribution packaging of goods should carry.</i>
B213 Packaging requirements	<i>Measures regulating the mode in which goods must be or cannot be packed, in conformity with the importing country handling equipment or for other reasons, and defining the packaging materials to be used.</i>
B220 Traceability requirements	<i>Traceability is the disclosure of information</i>

	<i>regarding the origin of materials and parts, including product processing history, and the distribution and location of the product after delivery. It aims to track through all phases of production and distribution.</i>
B221 Origin of materials and parts	<i>Description of geographical origin of materials and parts.</i>
B222 Processing history	<i>Description of all stages of production</i>
B223 Distribution and location of products after delivery	<i>Description of transport, handling and storage of products after the production is finished</i>
B229 Traceability requirements, n.e.s.	
B230 Tolerance limits for residues or restricted use of certain substances	<i>Maximum concentration or restrictions to use certain substances</i>
B231 Tolerance limits for residues or contamination by certain substances	<i>Maximum limits for toxic and other harmful substances and contaminants that enter the product during the production process.</i>
B232 Restricted use of certain substances	<i>Restriction on the use of certain substances as components or additives, which are therefore reasonably expected to exist in the final product. As a result, their specification is also important to prevent the risks arising from their use.</i>
B240 Regulation on genetically modified organisms (for reasons other than food safety)	<i>Restriction on imports if genetically modified organisms are used in the production.</i>
B250 Identity requirement	<i>Conditions to be satisfied in order to identify a product with a certain denomination (e.g. minimum, percentage content of an ingredient that gives the name to the final product such as cocoa content in "chocolate") cocoa.</i>
B260 Environment-specific requirement	<i>Conditions or requirements that aim to prevent environmental damage or ensure protection of the environment.</i>
B270 Other product characteristics requirements	
B280 Other production process requirements	
B290 Technical regulations n.e.s.	
B300 Conformity assessment related to TBT	<i>Control, inspection and approval procedure, including procedures for sampling, testing and inspection, evaluation, verification and assurance of conformity, and accreditation and approval.</i>
B310 Certification requirement	<i>Certification requirements either in the exporting or importing country.</i>
B311 Certification by government agencies of the countries of origin	<i>Requirement to obtain certifications from the exporting country.</i>
B312 Certification by local agencies in the	<i>Requirement to obtain certifications from the</i>

destination market	
B320 Lack of recognition	<i>importing country. Certifications issued by a country or authority are not recognized by the importing country.</i>
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B350 Registration requirement	<i>Importers may need to be registered in the importing country. It is often the case for sensitive products that may be related to security issues. Exporters need to contact a registered importer.</i>
B360 Repetition in destination market of identical tests for same or equivalent regulations	<i>For a given regulation, a same test must be performed within a destination country at national, regional and/or local entry points</i>
B370 Translation requirement for reports or certificates	<i>Documents must be translated to the language of the destination countries</i>
B380 Requirement to pass through specified entry point or customs	<i>Certain goods must be cleared at a specific entry point within a destination country for availability of testing or inspection facility</i>
B390 Conformity assessment related to TBT n.e.s.	
B900 Technical barriers to trade, n.e.s.	

C000 OTHER TECHNICAL MEASURES

C100 Pre-shipment inspection

A physical inspection of goods before they are shipped in the country of export, which establishes the exact nature of the goods. The inspection assures that the goods are in accordance with the accompanying documents that specify their customs tariff code, quality, quantity and price.

C200 Special custom formalities not related to SPS/TBT

Formalities to be fulfilled at the customs, which are not related to the administration of SPS/TBT measures.

C210 Documentation requirement

Requirement to produce any document used

C220 Direct consignment requirement	<i>to declare shipments to Customs in the country of import. Goods must be shipped directly from the country of origin, without stopping at a third country.</i>
C230 Requirement to pass through specified port of customs	<i>Goods must pass through a designated entry point and/ or customs office, which might slow down the import clearance process.</i>
C240 Transportation restrictions	<i>Particular transportations conditions, norms or laws stipulated by National Authorities of each country that may be considered as restrictive.</i>
C241 Restrictive Air transportations regulations	
C242 Restrictive Sea transportations regulations	
C243 Restrictive land transportations regulations	
C290 Special custom formalities not related to SPS/TBT, n.e.s.	
C900 Technical Measures n.e.s.	

D000 PRICE CONTROL MEASURES

	<i>Price control measures are implemented to control the prices of imported articles in order to: support the domestic price of certain products when the import price of these goods are lower; establish the domestic price of certain products because of price fluctuation in domestic markets, or price instability in a foreign market; and counteract the damage resulting from the occurrence of "unfair" foreign trade practices.</i>
D100 Administrative pricing	<i>By administrative price fixing, the authorities of the importing country take into account the domestic prices of the producer or consumer; establish floor and ceiling price limits; or revert to determined international market values. There may be different price fixing methods, such as minimum import prices or prices set according to a reference.</i>
D110 Minimum import prices	<i>Pre-established import price below which imports cannot take place.</i>
D120 Reference prices and other price controls	<i>Pre-established import price which authorities of the importing country use as reference to set a floor or ceiling price.</i>
D190 Administrative pricing n.e.s.	
D200 Voluntary export price restraint	<i>A Voluntary export price restraint is an</i>

D300 Variable charges

arrangement in which the exporter agrees to keep the price of his goods above a certain level.

Variable charges are taxes or levies aimed at bringing the market prices of imported agricultural and food products in line with the prices of corresponding domestic products 2. Primary commodities may be charged per total weight, while charges on processed foodstuffs can be levied in proportion to the primary product contents in the final product. These charges include:

D310 Variable levies

The rate of tax varies inversely with the price of imports. These charges are applied mainly to primary products. It may be called flexible import fee.

D320 Variable components

The tax includes a fixed component and a variable component. These charges are applied mainly to processed products where the variable part is applied on the primary products or ingredients included the final product. It may be called compensatory element.

D390 Variable charges n.e.s

D400 Antidumping measures

Antidumping measures are taken against a dumping action of an exporter. It is considered that dumping takes place when a product is introduced into the commerce of an importing country at less than its normal value, i.e. if the export price of the product exported is less than the comparable price, in the ordinary course of trade, for the like product when destined for consumption in the exporting country.

D410 Antidumping investigations

Antidumping investigations are initiated either following a complaint by local producers of similar goods or selfinitiated by importing country authorities when they have cause to believe that dumping may be materially injurious to national competing producers or third parties' exporters. Provisional duties may be applied during the investigation.

D420 Antidumping duties

Antidumping duties are levied on certain goods originating from specific trading partner(s) to offset the dumping margin. Duty rates are generally enterprise-specific.

D430 Price undertakings

Undertakings to increase the export price may be offered by exporters to avoid the imposition of antidumping duties.

D500 Countervailing measures

Under WTO rules, prices can be negotiated for this purpose, but only after the dumping has been proved.

Countervailing measures are intended to offset any direct or indirect subsidy granted by authorities in the exporting country. These may take the form of countervailing duties or undertakings by the exporting firms or by authorities of the subsidizing country.

D510 Countervailing investigations

Countervailing investigations are initiated either following a complaint by local producers of similar goods or selfinitiated by the importing country authority to determine whether the imported goods are subsidized and cause material injury.

D520 Countervailing duties

Duties levied on certain goods to offset the amount of subsidization granted by the exporter on the production or trade of these goods, when the subsidy is assumed to hurt domestic industry.

D530 Price undertakings

Undertakings to increase the export price may be offered by exporters to avoid the imposition of countervailing duties. Under WTO rules, prices can be negotiated for this purpose, but only after the injurious effect of the subsidy has been proved.

D600 Safeguard duties

Emergency and/or temporary duties imposed as a safeguard action. A country may take a "safeguard" action (i.e., restrict imports of a product temporarily) to protect a specific domestic industry from an increase in imports of any product which is causing, or which is threatening to cause, serious injury to the domestic industry that produces like or directly competitive products.

D700 Seasonal duties

Seasonal duties are applicable at certain times of the year, usually in connection with agricultural products.

D900 Price control measures n.e.s.

**E000 QUANTITY
MEASURES**

CONTROL

Quantity control measures are aimed at restraining the quantity of goods that can be imported, regardless of whether they come from different sources or one specific supplier. These measures can take the form of restrictive licensing, fixing of a predetermined quota, or through prohibitions. (Most quantity control measures are formally prohibited by

	<i>the GATT 1994, but can be applied under specifically determined circumstances (Article XI))</i>
E100 Non-automatic licence	<i>This licence is and import licence, which is not granted automatically. The licence may either be issued on a discretionary basis or may require specific criteria to be met before it is granted.</i>
E110 Licence with no specific ex-ante criteria	<i>This licence, which is sometimes also referred to as a discretionary license, is issued at the discretion of the issuing authority.</i>
E120 Licence for specified use	<i>This licence is limited to operations generating anticipated benefit in important domains of the economy, such as export production, investment projects, etc.</i>
E130 Licence linked with local production	<i>This licence requires the compulsory linkage of imports with local market outputs.</i>
E140 Licence combined with or replaced by special import authorization	<i>In addition to or instead of a licence issued by the main licensing body (usually the ministry of trade), a special import authorization or an inscription in a register is required by a specialized authority which is coordinating a sector of the domestic economy (ministry of industry, ministry of agriculture, etc).</i>
E150 Licence for non-economic reasons	<i>This licence is granted for political, religious reasons, or others, which hare not economic.</i>
E151 Licence for political reasons	<i>This licence is issued for political reasons rather than economic.</i>
E159 Licence for non-economic reasons, n.e.s.	
E190 Non-automatic licensing n.e.s.	
E200 Quotas	<i>Quotas involve restricting the importation of specified products through the setting of a maximum quantity or value of goods authorized for import. The different forms of quotas are:</i>
E210 Global quotas	<i>Global quotas are quotas established on the basis of the total quantity or value of imports of specific products, which can be filled on a first-come, first-served basis, or preallocated to different suppliers</i>
E211 Unallocated quotas	<i>Quotas that are filled on a first-come, first-served basis without allocating among exporters</i>
E212 Allocated to exporting countries	<i>Quotas which are pre-allocated among potential exporters</i>
E220 Bilateral quotas	<i>Quotas of imports reserved for a specific country</i>

E230 Seasonal quotas	<i>Quotas of imports for a given period of the year, usually set for certain agricultural goods.</i>
E240 Quotas linked with purchase of local goods	<i>Quotas defined as a percentage of the value of similar locally purchased goods.</i>
E250 Quotas for non-economic reasons	<i>Quotas for other reasons, rather than economic.</i>
E251 Quota for political reasons	<i>Quotas that are granted on the basis of political rather than economic reasons.</i>
E259 Quotas for non-economic reasons, n.e.s.	
E260 Tariff Rate Quotas	<i>A system of multiple tariff rates applicable to a same product. The lower tariff rates apply up to a quota of imports, and the higher rates are charged on imports which exceed the quota amount. Quota may be defined in terms of quantity or value.</i>
E270 Quotas linked with domestic production	<i>Compulsory linkage of imports (of materials or parts) with local production</i>
E290 Quotas n.e.s.	
E300 Prohibitions	
E310 Total prohibition (not for SPS reasons)	<i>Prohibition without any additional conditions or qualifications</i>
E320 Suspension of issuance of licences	<i>The suspension of issuance of licences is a form of de facto prohibition. This situation may arise in cases related to short-term balance-of payments difficulties, or for other reasons.</i>
E330 Seasonal prohibition	<i>Seasonal prohibition involves the prohibition of imports during a given period of the year. This is usually applied to certain agricultural products.</i>
E340 Temporary prohibition	<i>This prohibition is set only for a limited period of time, though it may not refer to a fixed ending date. It is usually for urgent matters.</i>
E350 Prohibition of importation in bulk	<i>Requirement that products must be imported in small packages or containers</i>
E360 Prohibition of products infringing patents or intellectual property rights	<i>Prohibition of copies, counterfeits or imitations of patented or trademarked products</i>
E370 Prohibition for non-economic reasons	<i>Prohibitions for political, religious reasons, or others, which are not economic.</i>
E371 Prohibition for religious, moral or cultural reasons	<i>Some countries will prohibit the import, use, or possession of any item that is held to be contrary to the tenets of their Faith. This could include non religious materials, pork, alcohol products and illicit drugs or any other item that could be contrary to religion precepts. Any product that is related to pork</i>

E372 Prohibition for political reasons (Embargo)

even if it's not used as food like pig skin is still prohibited in some countries.

Prohibition of imports from a country or group of countries, applied for political reasons.

E379 Prohibition for non-economic reasons, n.e.s.

E390 Prohibitions, n.e.s.

E400 Quantitative safeguard measures

Measures having effect on quantitative restrictions. Quantitative safeguard measures are adopted when the government of the importing country wishes to prevent or remedy serious injuries resulting from a sudden increase of imports, or to facilitate adjustment.

E500 Export restraint arrangement

An arrangement by which an exporter agrees to limit exports in order to avoid imposition of restrictions by the importing country, such as quotas, raised tariffs or any other import controls. The arrangement may be concluded at either government or industry level.

E510 Voluntary export restraint arrangements (VERs)

Voluntary export restraints are arrangements made by government or industry of an exporting country to voluntarily limit exports in order to avoid imposition of mandatory restrictions by the importing country.

E511 Quota agreement

Export quotas, which a given exporting country would accept from an importing country to avoid imposition of mandatory restrictions

E512 Consultation agreement

Agreement that includes provisions for consultation with a view to introducing restrictions under certain circumstances

E513 Administrative co-operation agreement

Agreement that includes provisions for administrative cooperation with a view to avoiding disruptions in bilateral trade.

E590 Export restraint arrangements n.e.s.

E900 Quantity control measures n.e.s.

F000 PARA-TARIFF MEASURES

Other measures that increase the cost of imports in a manner similar to tariff measures, i.e. by fixed percentage or by a fixed amount, calculated respectively on the basis of the value and the quantity, are known as para-tariff measures. Four groups are distinguished: customs surcharges; additional taxes and charges; internal taxes and charges levied on imports; and decreed

F100 Customs Surcharges

custom valuation.

Customs surcharges, which are also called surtax or additional duty, is an ad hoc trade policy instrument to raise fiscal revenues or to protect domestic industries.

F200 Additional taxes and charges

Additional charges, which are levied on imported goods in addition to customs duties and surcharges and which have no internal equivalent, and which comprise various taxes and fees. The category of additional charges includes the tax on foreign exchange transactions, stamp tax, import licence fee, consular invoice fee, statistical tax, tax on transport facilities and charges for sensitive product categories. Various other taxes, such as the export promotion fund tax, taxes for the special funds, the municipal tax, registration fee on imported motor vehicles, customs formality tax, etc., are classified as additional charges, n.e.s.

F210 Tax on foreign exchange transactions

F220 Stamp tax

F230 Import licence fee

F240 Consular invoice fee

F250 Statistical tax

F260 Merchandise handling or storing fees

F270 Tax on transport facilities

F280 Taxes and charges for sensitive product categories

F290 Additional charges, n.e.s.

Article III of the GATT Agreement allows internal taxes to be applied to imports; however, these taxes should not be higher than those applied to similar domestic products.

F300 Internal taxes and charges levied on imports

F310 General sales taxes

The general sales tax levied on imports is the equivalent of those internal taxes that are applied to all or most products.

Three types of internal axes can be distinguished: first, the one commonly known as sales tax, which is an ad valorem tax based on the gross receipts of sales of goods, collected at regular intervals from traders; secondly, the turnover tax or multiple sales tax, which is a tax imposed at more than one level of production and distribution and is based on gross receipts, resulting in a accumulation of taxes; thirdly, the value-

added tax which is a modified turnover tax based on the net value added instead of on the gross receipts, avoiding accumulation of taxes and not affecting the price structure and the allocation of resources.

F330 Taxes and charges for sensitive product categories

F390 Internal taxes and charges levied on imports n.e.s.

F400 Decreed Customs Valuations

Customs duties and other charges on selected imports can be levied on the basis of a decreed value of goods (the so-called "valeur mercariale" in French). This practice is presented as a means to avoid fraud or to protect domestic industry. The decreed value de facto transforms an ad valorem duty into a specific duty.

F900 Para-tariff measures n.e.s

G000 FINANCE MEASURES

Financial measures are intended to regulate the access to and cost of foreign exchange for imports and define the terms of payment. They may increase import costs in the same manner as tariff measures.

G100 Advance payment requirement

Advance payment requirements related to the value of the import transaction and/or related import taxes, are made at the time an application is lodged, or when an import license is issued. These payment requirements can consist of:

G110 Advance import deposit

Advance import deposits require the importer to deposit a percentage of the value of the import transaction before receiving the goods. No interest is paid on these deposits

G120 Cash margin requirement

Cash margin requirements entail depositing the total amount of the transaction value in a foreign currency, or a specified part of it, in a commercial bank, before the opening of a letter of credit.

G130 Advance payment of customs duties

Advance payment of custom duties entails paying all or part of the customs duties in advance; no interest is paid on these advance payments.

G140 Refundable deposits for sensitive product categories

Refundable deposits are charges which are refunded when the used products or the containers they came in are returned to a collection system.

G190 Advance payment requirements, n.e.s.

G200 Multiple exchange rates	<i>Varying exchange rates for imports, depending on the product category. Usually, the official rate is reserved for essential commodities while the other goods must be paid at commercial rates or occasionally by buying foreign exchange through auctions.</i>
G300 Restrictive official foreign exchange allocation	<i>These restrictions are usually executed by the central bank in the form of permits, visas, authorizations, etc, and are intended to control import flows. Foreign exchange allocation is sometimes prohibited under this measure.</i>
G310 Prohibition of foreign exchange allocation	<i>No official foreign exchange allocations available to pay for imports.</i>
G320 Bank authorization	<i>A special authorization needs to be obtained from the central bank.</i>
G330 Licence linked with non-official foreign exchange	<i>A licence is granted if official foreign exchange is not required.</i>
G331 External foreign exchange	<i>A licence is granted only for imports required for technical assistance projects and other sources of external foreign exchange.</i>
G332 Importers' own foreign exchange	<i>A licence is granted if importers have foreign exchange held in an overseas bank.</i>
G339 Licence linked with non-official foreign exchange, n.e.s.	
G390 Restrictive official foreign exchange allocation, n.e.s.	
G400 Regulations concerning terms of payment for imports	<i>These regulations cover the terms of payment of imports and the obtaining and use of credit (foreign or domestic) to finance imports.</i>
G500 Transfer delays, queuing	<i>Transfer delays and queuing relate to the maximum permitted delays between the date that goods have been delivered and the date of the final settlement of the imported goods (usually 90, 180 or 360 days for consumer goods and industrial inputs and two to five years for capital goods). Queuing takes place when the prescribed delays cannot be observed because of foreign exchange shortages, and when transactions are settled after a longer delay.</i>
G600 Surrender requirement	<i>This requirement relates to the surrender of foreign exchange earnings to the central bank.</i>
G900 Finance measures n.e.s.	

H000 ANTI-COMPETITIVE MEASURES	<i>Measures to grant exclusive or special preferences or privileges to one or more limited group of economic operators, for social, fiscal, economic or political reasons.</i>
H100 Single channel for imports	<i>The requirement that all imports, or imports of selected commodities, have to be channeled through state-owned agencies or state-controlled enterprises. The private sector is sometimes also granted exclusive import rights.</i>
H110 State trading administration, for importing	
H120 Sole importing agency	
H190 Single channel for imports, n.e.s.	
H200 Compulsory national service	<i>Compulsory national service consists of government-backed exclusive rights of national insurance and shipping companies on all or a specified share of imports.</i>
H210 Compulsory national insurance	
H220 Compulsory national transport	
H290 Compulsory national service, n.e.s.	
H900 Anti-competitive measures, n.e.s.	
I000 EXPORT RELATED MEASURES	<i>Export-related measures are measures applied by the government of the exporting country on exported goods.</i>
I100 Export taxes	<i>Export taxes/duties are taxes collected on goods or commodities by the government of the exporting country. Export taxes can be set either on a specific or an ad valorem basis</i>
I200 Export quantitative restriction	<i>Restrictions to the quantity of goods exported to a specific country or countries by the government of the exporting country for reasons such as: shortage of goods in the domestic market; avoiding antidumping measures; or for political reasons.</i>
I210 Export Prohibition	<i>Prohibition of exports of certain products</i>
I220 Export quotas	<i>Quotas that limit value or volume of exports.</i>
I230 Licensing or permit requirements to export	<i>Exporters are required to obtain licensing or permit by the government of the exporting country to export products.</i>
I240 Registration, tight regulation or restriction to export	<i>Requirement to register products before being exported (for monitoring purposes)</i>
I290 Export quantitative restrictions, n.e.s.	
I300 Certification	<i>Requirement by the exporting country to obtain sanitary, phytosanitary or other</i>

	<i>certification before the goods are exported</i>
I400 Inspection fee	<i>A fee levied by the government authority of exporting country to cover the cost of inspection for exporting products</i>
I500 State trading administration	<i>All or parts of exports of selected commodities have to be channeled through specific enterprises identified by governments.</i>
I600 Dual pricing schemes	<i>Different prices for products are applied depending on whether they are sold on domestic market or export markets.</i>
I900 Export measures n.e.s.	
<hr/>	
J000 TRADE-RELATED INVESTMENT MEASURES	
J100 Local content measures	<i>Requirement to use certain minimum levels of locally made component, which restrict the level of imported components.</i>
J200 Trade balancing measures	<i>Measures limiting the purchase or use of imported products by an enterprise to an amount related to the volume or value of local products that it exports</i>
J900 Trade-related investment measures, n.e.s	
<hr/>	
K000 DISTRIBUTION RESTRICTIONS*	<i>Restriction to limit and rule the way the products are distributed. It may be controlled through additional license or certification requirement</i>
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M000 SUBSIDIES*	<i>Financial contribution by a government or government body to a production structure, being a particular industry or company, such as direct transfer of funds or potential transfer of funds (e.g. grants, loans, equity infusions), payments to a funding mechanism and income or price support.</i>
<hr/>	
N000 GOVERNMENT PROCUREMENT RESTRICTIONS*	<i>Measures controlling the purchase of goods by government agencies, generally by preferring national providers</i>
<hr/>	
O000 INTELLECTUAL PROPERTY*	<i>Intellectual property legislation covers patents, trademarks, industrial designs, lay-</i>
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out designs of integrated circuits, copyright, geographical indications and trade secrets.

P000 RULES OF ORIGIN*

Rules of origin cover laws, regulations and administrative determinations of general application applied by government of importing countries to determine the country of origin of goods. Rules of origin can restrict trade when it is difficult to determine the origin of the final product if raw materials and parts come from different countries. Rules of origin are important in implementing such trade policy instruments as antidumping and countervailing duties, origin marking, and safeguard measures.

* Until further decision by MAST members, no efforts will be made to collect measures under these categories from official sources. These categories have been created in order to reflect potential concerns by traders through surveys and questionnaires.

Classification of procedural obstacles

A: ARBITRARINESS OR INCONSISTENCY

1. Behaviour of public officials
2. Product classification and/or valuation
3. Application of procedure, regulation, or requirement (including inconsistencies between local and national procedure or regulation)

B: DISCRIMINATORY BEHAVIOUR FAVOURING SPECIFIC PRODUCERS OR SUPPLIERS

1. Local suppliers or producers in destination market
2. Suppliers from other countries
3. Large (or small) companies

C: INEFFICIENCY OR OBSTRUCTION

1. Excessive documentation requirement
2. Strict/detailed/redundant testing, certification or labelling
3. Administrative delay (*e.g.* in authorisation, approval)
4. Complex clearances mechanism (*e.g.* several entities have to approve)
5. Short submission deadlines for required information or forms
6. Outdated procedures, (*e.g.* lack of automation)
Lack of resources, (*e.g.* understaffing, scarce equipment in destination market)

D: NON-TRANSPARENCY

1. Inadequate information on laws/ regulations/registration
2. Unannounced change of procedure, regulation or requirement
3. Lack of inquiry point
4. Non-transparent government bid or reimbursement process
5. Non-transparent dispute resolution
6. Informal payment expected or required

E: LEGAL ISSUES

1. Lack of enforcement, *e.g.* patents, copyrights, trademarks, confidentiality
2. Inadequate due process/appeals process/dispute resolution
3. Inadequate legal infrastructure

F: UNUSUALLY HIGH FEES OR CHARGES (*e.g.* for stamp, testing or other services rendered)

APPENDIX 2
DAIRY EXPORTS BY INDIVIDUAL EAC PARTNER STATES²³
1997-2008

²³ No data was available for Burundi. Burundi only has marginal dairy exports.

Kenya's Dairy Exports, 1997-2008

Recorded exports by destination country (USD)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total	% Total
EAC Members														
Tanzania	127,799	51,808	176,307	72,643	100,511	250,071	130,968	70,991	191,444	989,855	1,706,426	1,074,431	4,943,254	19%
* Uganda	50,067	14,961	40,506	115,139	50,070	28,954	36,788	28,462	315,760	2,262,405	3,078,048	1,559,853	7,581,012	29%
* Rwanda	62,456	233	2,940	17,776	-	-	-	378	865	36,358	428,562	144,524	694,092	3%
* Burundi	-	540	994	5	490	5,860	-	93,566	821,365	547,273	385,407	9,426	1,864,926	7%
COMESA Members (excl. EAC)														
Congo DR	40	-	12,802	6,128	49,369	-	46,283	-	896,047	531,143	1,155,780	340,923	3,038,516	11%
Comoros	-	-	307	-	38,563	97,850	-	-	-	-	-	-	136,720	1%
Egypt	-	-	-	-	-	-	-	-	-	-	306,746	501,368	808,114	3%
Eritrea	-	-	-	-	-	-	9,427	4,907	341	-	481	-	15,156	0%
Ethiopia	-	20	2,352	13,520	537	-	-	37	2,867	2,324	-	-	21,658	0%
Madagascar	-	-	10,685	24,899	8,783	-	-	-	-	174,131	-	-	218,498	1%
Malawi	-	-	255	-	-	-	-	-	-	374,342	201,890	-	576,486	2%
Mauritius	-	-	-	-	-	-	1,782	-	427	24,915	1,649	1,736	30,508	0%
Seychelles	-	987	4,062	-	-	-	-	3,899	-	770,276	2,433	604	782,261	3%
Sudan	24,706	56,713	78,583	34,299	-	-	12,397	4,952	19,392	79,855	242,655	143,683	697,235	3%
Zambia	-	-	-	-	-	16,858	156,972	-	-	87,034	-	-	260,864	1%
Zimbabwe	-	-	-	-	-	-	-	-	-	-	-	1,011	1,011	0%
Other Africa														
Botswana	-	-	-	-	-	-	-	-	-	-	10,311	-	10,311	0%
Mozambique	-	-	-	-	-	-	-	-	-	-	-	14,677	14,677	0%
Nigeria	-	-	-	-	-	-	-	-	-	-	76	-	76	0%
Somalia	4,099	-	20,442	23,759	130,382	48,068	99,561	164,631	72,696	596,966	25,695	6,035	1,192,335	5%
South Africa	-	-	-	-	-	-	14,032	-	-	3,390	-	27,566	44,987	0%
Swaziland	-	-	-	-	-	-	-	392	-	-	-	-	392	0%
European Union														
Denmark	-	-	-	842	-	-	-	-	-	-	-	-	842	0%
France	-	-	-	-	-	-	-	-	-	510	-	-	510	0%
Germany	-	-	-	515	-	256	521	-	4,362	-	-	-	5,654	0%
Italy	-	-	-	-	-	13,186	-	-	-	-	-	-	13,186	0%
Netherlands	-	-	-	-	-	-	326	-	-	44,204	23,636	-	68,167	0%
United Kingdom	23	-	-	-	-	-	-	-	-	78	-	-	101	0%
Other														
Ascension Island	-	-	-	-	-	-	65,545	197,450	21,415	52,752	45,875	33,093	416,130	2%
Canada	-	-	-	-	-	-	-	32	-	5,664	-	-	5,696	0%
Japan	328,121	-	-	-	-	-	-	-	-	-	-	-	328,121	1%
Oman	-	-	-	-	-	-	-	-	-	51	-	-	51	0%
Singapore	82,030	-	-	-	-	-	-	-	-	-	-	-	82,030	0%
Switzerland	-	-	-	-	5,298	134	-	-	-	-	4,034	-	9,466	0%
Thailand	194,588	-	-	630	-	-	-	-	-	-	-	-	195,218	1%
United Arab Emirates	-	-	-	-	301	-	416	411	473	-	28	-	1,629	0%
United States of America	-	-	-	-	-	41	-	117	-	22,647	5,729	9,757	38,291	0%
Yemen	-	-	-	-	-	-	8,710	3,646	-	-	2,174,328	23	2,186,707	8%
Unknown / unspecified	39,608	25,651	24,381	40,268	34,008	22,008	-	-	168	926	9,790	67	196,874	1%
TOTAL	913,537	150,913	374,616	350,423	418,312	483,286	583,728	573,871	2,347,620	6,607,100	9,809,579	3,868,776	26,481,760	100%

* Member of EAC and COMESA trade blocks.

COMSTAT data.

Uganda's Dairy Exports, 1997-2008

Recorded exports by destination country (USD)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total	% Total
EAC Members														
Tanzania	-					4,442	88,533	58,689	26,586		17,238	42,789	238,277	4%
* Kenya	34,322		10,078		27,341	48,312			54,776	19,303	199,233	1,834,726	2,228,091	40%
* Rwanda	389,514	222,164	99,490				373,344			359	15,799	61,822	1,162,492	21%
* Burundi										2,782	1,762	37,086	41,630	1%
COMESA Members (excl. EAC)														
Congo DR	232,112	11,192	3,680			2,785				20,721	36,601	2,796	309,887	6%
Egypt		7,570			738		5,430					163,227	176,965	3%
Eritrea						25,855	74,343	8,648					108,846	2%
Ethiopia				4,006							4,365		8,371	0%
Mauritius										20	12,374		12,394	0%
Sudan						1,038	4,050		4,778	20,494	19,260	388,640	438,259	8%
Other Africa														
Central African Republic												610	610	0%
Nigeria						99							99	0%
South Africa								182		29			211	0%
European Union														
Belgium		57,214					4,765	50,317					112,296	2%
France		50,679											50,679	1%
Germany					4,782								4,782	0%
Netherlands		65,731										1,100	66,831	1%
United Kingdom			26									813	839	0%
Other														
Iran			26,497										26,497	0%
Oman			1,560										1,560	0%
Qatar			88,462	60,583									149,045	3%
Sri Lanka											52,191		52,191	1%
Switzerland			47					4,838					4,885	0%
Syria												48,160	48,160	1%
Thailand		2,452											2,452	0%
United Arab Emirates								440				67,500	67,940	1%
United States of America												6,755	6,755	0%
Yemen												133,471	133,471	2%
Unknown country	3,862		50,592					41,514					95,968	2%
TOTAL	659,810	417,002	280,432	64,589	32,861	82,531	550,465	164,629	86,139	63,707	306,633	2,841,686	5,550,485	100%

* Member of EAC and COMESA trade blocks.

COMSTAT data.

Tanzania's Dairy Exports, 1997-2008

Recorded exports by destination country (USD)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total	% Total
EAC Members														
Uganda							1,114		2,630	4,574	4,916	40,370	53,604	3%
* Kenya			39,443	115,193	17,687	3,912			4,967	50,906	13,807	14,039	259,954	15%
* Rwanda						398				2,033			2,431	0%
* Burundi										85			85	0%
COMESA Members (excl. EAC)														
Congo DR		59	2,320						56,981				59,360	3%
Zambia												731	731	0%
Zimbabwe						40,419						8,109	48,528	3%
Other Africa														
Botswana										1,889			1,889	0%
Mozambique									2,365				2,365	0%
South Africa									1,816				1,816	0%
European Union														
Germany											6,960		6,960	0%
Netherlands							1,704			40,527			42,231	2%
Other														
Hong Kong					11,101								11,101	1%
India		25,046											25,046	1%
Maldives				250									250	0%
Oman												1,016,973	1,016,973	60%
Pakistan				6,968									6,968	0%
Saudi Arabia					2,378								2,378	0%
Switzerland							294					3,361	3,655	0%
United Arab Emirates	39		2,317	274							73,111	1,897	77,638	5%
United States of America			6			3,005						11,225	14,236	1%
Unknown country								58,137					58,137	3%
TOTAL	39	25,105	44,086	122,685	31,166	47,734	3,112	58,137	68,759	100,014	98,794	1,096,705	1,696,336	100%

* Member of EAC and COMESA trade blocks.
COMSTAT data

Rwanda's Dairy Exports, 1997-2008

Recorded exports by destination country (USD)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total	% Total
EAC Members														
Tanzania													-	0%
* Kenya													-	0%
* Rwanda													-	0%
* Burundi							1,929						1,929	1%
COMESA Members (excl. EAC)														
Congo DR	10,701						137,952						148,653	46%
Other Africa													-	0%
European Union													-	
Netherlands							31,820						31,820	10%
Other														
United Arab Emirates							1,392						1,392	0%
Unknown country								141,117					141,117	43%
TOTAL	10,701	-	-	-	-	-	173,093	141,117	-	-	-	-	324,911	100%

* Member of EAC and COMESA trade blocks.

COMSTAT data