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Food safety in Africa and strategic directions for improving policy and regulatory frameworks

Delia Grace¹, Silvia Alonso¹, Kristina Roesel¹, Namukolo Covic², John McDermott²

¹ International Livestock Research Institute. ² International Food Policy Research Institute

Introduction

Foodborne diseases (FBD) and associated food safety concerns and associated impose health and economic burdens and indirectly affect the development and flourishing of domestic and export food sectors in Africa. Because these impacts are large, they will compromise the attaining of the Sustainable Development Goals and the commitments of the Malabo declaration unless FBD in Africa are brought under control. Food safety concerns will become of even greater importance as developments advance towards a free trade zone for the continent. Promoting food safety systems becomes necessary.

Status and trends of food safety in Africa

A food safety hazard is anything in food that can harm the consumer's health both through short-term and long-term exposure; hazards may be biological, chemical or physical. FBD are illnesses caused by contaminated or naturally harmful food or beverages. Systematic and comprehensive evidence on the **health burden** of FBD in developing countries started to become available only recently. The landmark first assessment of the global burden of FBD, conducted by the World Health Organization (WHO), was published in 2015¹ and showed that FBD have a global health burden comparable to malaria, HIV/AIDS or tuberculosis and revealed how the negative health impact of FBD has been grossly overlooked in the past. The report also shows most of the burden (98%) falls on developing countries, with Africa presenting the highest incidence and highest death rates and disability-adjusted life year (DALY) per capita among all ages, including children under five (who bear 43% of the burden in Africa). Moreover, undernutrition and FBD are related – infectious FBD commonly manifest as diarrhoea, which is strongly associated with stunting^{2,3,4}. In Africa, around 70% of the burden of FBD results from non-gastrointestinal manifestations that can also cause undernutrition through reduced appetite and increased nutrient requirements due to inflammation, infection or other catabolic conditions⁵. This is much higher than in other regions. Moreover, there are some hazards which are especially problematic in Africa: these include cassava cyanide, aflatoxins and cysticercosis caused by pig tapeworm. Overall, the WHO estimates that the three most important hazards in Africa in terms of human health burden are non-typhoidal *Salmonella*, pig tapeworm and toxigenic *Escherichia coli*. Together, these account for half the known burden of foodborne disease.

In addition, foodborne illness is also associated with a wide range of **economic costs**. These include a) the harm caused by the disease (e.g. lost productivity from illness), b) the cost of response (e.g. treatment and food recalls) and c) the cost of prevention (e.g. food safety governance and risk reducing practices). As well as these costs due to FBD in domestic markets, additional losses are associated with trade: the cost of compliance with requirements; losses from rejected exports; and, foregone opportunities as the result of exclusion from highly demanding markets. A recent study from the World Bank gives the first global estimate of the economic burden of FBD⁷. The study measured the productivity cost of FBD in terms of lost human capital from sickness and death in Africa (USD 17 billion), treating foodborne illnesses (USD 2.5 billion) and rejection of exported food because of failure to comply with trading regulations (approx. USD 1 billion). Three countries in sub-Saharan Africa have costs exceeding USD 1 billion a year (Nigeria, South Africa and Angola). The World Bank analyses suggested that the public health and domestic economic costs of unsafe food may be 50 times the trade-related costs for sub-Saharan Africa. However, regional and international trade can catalyse economic growth, and numerous studies have shown that, with proper support, African countries can export relatively high-risk food to demanding but remunerative markets.

Setting up legislation and enforcement of food safety practices and standards requires economic investments by the public sector. Compliance with food safety requirements, both in national and international markets, represents a direct cost for private industries. These costs are normally higher for small enterprises than for

middle and large companies. Accessing international markets poses additional economic costs for businesses to address and manage food safety and comply with highly stringent international standards. Major food safety incidents can raise alarms in trade partner countries, affect export markets and result in large economic impacts for the country. Similarly, consumer response to food safety scares can have enormous economic impacts on domestic markets and erode trust in government and food safety authorities if not appropriately managed.

Foodborne disease also has implications for equity and culture. In many African countries, women predominate in food processing and retail: in nearly all African countries, women have primary responsibility for food preparation within the household. (However, modernising food systems have a tendency to exclude women.) Hence, addressing gender issues is essential to assuring safe food. Other studies show that unsafe and low-quality food may be channelled towards the poorest, putting them most at risk. From a more positive perspective, food has an important role in cultures, and several African cuisines such as Ethiopian tibs or South African biltong are world famous. Ensuring traditional African foods are safe and nutritious can therefore help maintain important traditions while supporting tourism and export.

Proposed strategic directions for improving food safety policy and regulatory frameworks in Africa

Past and current food safety efforts in Africa have substantially focused on access to regional and overseas export markets, with emphasis on oversight by national control systems to facilitate trade. Relatively little is being done to reduce foodborne illnesses and upscale food safety in national markets. This current focus reflects the economic importance of food exports to African governments, the role of African governments in overseeing exports and the focus of European and other donors on the safety of food they import from sub-Saharan Africa. These efforts should continue as exports are important for vibrant and diversified economies. At the same time, recent analysis from WHO and the World Bank underscores the importance of focusing on food safety as an African health challenge, especially in the subsistence and informal market sectors where millions of Africans get most of their food. This new evidence implies a new strategic direction for food safety efforts in Africa is warranted, which should include the following recommendations:

- *Elevate food safety in sub-Saharan Africa on the international health agenda*, increasing government and donor investments in food safety to investigate hazards and increase research and development of strategies to reduce health risks in both formal and informal markets.
- *Establish goals, priorities and strategies that consider the health and development impacts of foodborne illnesses*. Africa's national governments and regional institutions, in dialogue with the donor community, should establish evidence-based goals, priorities and strategies that consider the health burden and development impacts of foodborne illnesses, especially in domestic markets.
- *Apply Codex food safety principles and risk-based prevention*, as appropriate to local conditions and ensure that every project makes a sustainable contribution to improving food safety.
- *Harness today's marketplace drivers of progress on food safety*. Donors and national governments should use their position and resources to recognize, catalyze and support consumer and marketplace drivers of progress on food safety.

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