

# FOOD SAFETY IN FOOD SECURITY AND FOOD TRADE

## Food Safety Policy Issues for Developing Countries

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2020  
VISION

FOR FOOD, AGRICULTURE,  
AND THE ENVIRONMENT

FOCUS 10 • BRIEF 17 OF 17 • SEPTEMBER 2003

**F**ood safety issues have attracted international attention because they play an increasingly important role in determining whether developing countries have access to export markets. At the same time, food suppliers in developing countries face the challenge of improving food safety for their growing urban middle classes, and the large burden of disease that poor food safety generates in developing countries is more widely appreciated. Because developing countries produce and consume more perishable foods than before, such as meat, milk, fish, and eggs, food safety has become especially important to domestic consumers and in trade among developing countries.

### EVALUATING THE PUBLIC SECTOR ROLE IN FOOD SAFETY

Actions by firms or households are frequently undertaken to improve food safety, and market incentives can be sufficient in bringing about successful private efforts to meet quality and safety standards. Public sector activities are frequently unnecessary if they simply displace such private sector or household activities. But when is public intervention necessary?

The "public goods" nature of many food safety activities is one reason for public intervention. Individual producers or firms may not be able to adequately control an environmental food safety hazard without cooperative effort, thus the public sector may be needed to enforce controls, certify sanitary conditions, or invest in the necessary supporting infrastructure. In domestic markets, consumers cannot always judge food safety or avoid the hazards that endanger the safety and quality of food. And public intervention may sometimes be needed to protect vulnerable groups—such as small children—by setting minimum safety standards. In export markets, the public role is clear in government-to-government negotiations regarding market access.

Public sector interventions to improve food safety can be evaluated in terms of the benefits gained and costs incurred. Improved food safety results in enhanced consumer well-being and increased life expectancy, and the monetary value of these improvements can be measured in greater productivity levels and reduced health care costs as food-borne illness declines. Such benefits must be weighed against the costs of public actions or investments to improve food safety. Because there is no direct market for health, monetary value estimates of these benefits are not easily obtained, and public health investments are sometimes evaluated in terms of how cost-effectively they meet predetermined goals. In some cases a fixed amount of public resources is allocated to actions that have the greatest impact on public health.

The relative importance of food safety risks differs with climate, diet, income levels, and public infrastructure. Poor sanitation and inadequate drinking water pose a much greater hazard to public health in developing countries than in developed ones.

As such, public health interventions within developing countries might differ from interventions that would address export market access.

Because interventions targeted to domestic public health may not directly improve export product quality, there may be both tradeoffs and synergies between food safety interventions for these two different goals. The benefit from public action to help industry meet export market standards can be measured in the value of additional exports. The two kinds of benefits resulting from improved food safety in a developing country—improvements in public health and increased export earnings—will differ in terms of their magnitude, distribution and ramifications, and thus will be difficult to compare. Separate public agencies may be responsible for public health and export market development, making such comparisons unlikely. Export earnings, more easily measured in direct monetary terms, may provide more compelling political reasons for public action in support of food safety in the short run.

However, investments to meet export market standards have synergistic benefits for domestic food safety. These synergies are more likely to occur when the export product is also consumed domestically, the investments affect a large portion of production, and the safety requirements do not price the food out of the range of the majority of domestic consumers. If such conditions are met, the investments in infrastructure or in food safety regulations then have the potential to benefit domestic consumers.

Is it desirable for a developing country to have a "dual standard" for food safety, with one standard for exported products and another for products consumed domestically? New export markets can provide income generation and may be expected to improve health and well-being in the exporting country indirectly, primarily by increasing household income. But the relative importance of certain food safety risks and the market mechanisms for determining who bears the costs of mitigating those risks will differ between most developing countries and most industrial countries. Thus it may not be beneficial for export standards to apply to domestic production, even when the commodity is widely consumed locally. What is important is that governments establish an inclusive, transparent and well-informed process whereby each country can decide the merits of a single- or dual-standard system.

### EXAMPLES OF PUBLIC ACTIONS TO IMPROVE FOOD SAFETY

Public sector actions to support improved food safety can be placed into five categories:

**Policy-making** at the national level is needed to establish effective food safety regulation, which requires the capacity for assessing food safety risks, the establishment of priorities for

policy intervention, and the ongoing monitoring and evaluation of food safety risks. Establishing a legal and regulatory framework is often a necessary first step towards achieving export market access. In Bangladesh, for example, Hazard Analysis Critical Control Point (HACCP) regulations based on the HACCP model adopted in major export markets during the 1990s were part of a package of activities required to regain export market access following an E.U. ban (see Brief 9). These regulations established a regulatory framework in Bangladesh equivalent to that existing in export markets.

**Capacity building to participate in the international arena** allows developing countries to engage in and influence the “rules of the game” governing food safety. Developing-country government officials need to be able to more effectively use existing trade rules and agreements and to argue for changes in them in a more powerful manner. In order to do this, they must have the capacity to participate effectively in the three international standard-setting organizations recognized by the WTO to ensure that internationally agreed-upon standards reflect production conditions particular to that developing country. Furthermore, they must have the capacity to negotiate market access (see Brief 11). Such negotiations will become more important between developing countries in the future as the high-value product trade among them expands (see Brief 14).

**Provision of information** by the public sector can make it easier for consumers or export buyers to identify and reward safer products. Certifying production conditions to satisfy domestic and export buyers (see Brief 10) is a well-established public role or function, and facilitation of private quality and safety certification is also becoming an important public role. As discussed in the Guatemala case (see Briefs 7 and 12), such facilitation includes establishing voluntary guidelines, authorizing testing agencies, and auditing producer group records. The case studies in this collection show that food safety concerns have significant impacts on traditional producers of high-value agricultural products in developing countries. These farmers need not only to produce safe food, but to assure buyers that their product is safe. Thus facilitating collective action among small producers for certification of food safety and quality is likely to be a critical part of agricultural policy in developing countries.

**Direct public efforts to prevent and control hazards** can be useful when hazard control is a public good. Public goods in developing countries include basic investments in sanitation infrastructure, particularly at key points in the food supply chain. In China (see Brief 13), the government has tried centralizing slaughter facilities in an attempt to improve meat hygiene. Additional examples include targeted infrastructure investments to facilitate better handling and processing, such as cold storage facilities in ports or clean water supplies in markets.

**Investments in infrastructure and research** are sometimes necessary as part of overall food system development.

Investments to improve food safety include the development of rural sanitation and water supply infrastructure that support better hygiene at the beginning of the food supply chain as well as marketing infrastructure that improves the performance of the system in terms of timeliness, freshness, cleanliness, and quality. Investments in research targeted to food safety might lead to the discovery or adaptation of new methods of control for important hazards, such as the development of aflatoxin-resistant crop varieties. Applied research on pest control in order to reduce negative health effects resulting from pesticide application and residues on horticultural products is another example. These kinds of public sector investments in infrastructure and research are more likely to have positive benefits for food safety *within* developing countries, but also set the stage for better export market performance.

## CONCLUDING COMMENTS

Food safety is no longer simply a public health issue. It is also a market development issue. The focus on food safety in international trade and in trade agreements has also made it a trade issue for many countries—developed and developing alike. The process of adaptation by the developing countries to standards and expectations originally set for developed country consumers could potentially yield benefits in developing countries. Looking to the future, the growth in demand within developing countries for highly valued products, such as meat, fish, and horticultural products, will increase the returns to improved food safety for both domestic producers and consumers. The perishable high-value food products that most often give rise to safety concerns will become important building blocks of South-South trade.

But the benefits from food safety improvement will only be captured if policymakers in developing countries understand both food safety risks and their impact on public health, and the synergies between development of the domestic food system and food export industries. In addition, developing countries must establish processes for food safety policy development that are inclusive, in that they take into account the interests of many different groups; transparent, in that they use verifiable information, relate decisions to evidence-based rationales, and communicate those rationales in a widely accessible manner and in a timely way; and competent, in that they are based on the best available information about the magnitude and distribution of benefits and losses. ■

For further reading see C. Delgado, M. Rosegrant, H. Steinfeld, S. Ehui, and C. Courbois, *Livestock to 2020: The Next Food Revolution, 2020 Vision Discussion Paper 28* (Washington, DC: IFPRI, FAO, and ILRI, 1999); and L. J. Unnevehr and N. Hirschhorn, *Food Safety: Issues and Opportunities for the World Bank, World Bank Technical Paper No. 469* (Washington, DC, May 2000).

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