

## **Food safety**

### **Report by the Secretariat**

1. The Fifty-third World Health Assembly in resolution WHA53.15, *inter alia*, requested the Director-General to give greater emphasis to food safety and collaborate with FAO and other international organizations. The Director-General was also urged to put in place a global strategy for the surveillance of foodborne diseases and for the efficient gathering and exchange of information in and between countries. As a result WHO organized a meeting on the strategic planning of food safety (Geneva, February 2001), and, following further consultation with Member States, published the Global strategy for food safety in 2002.<sup>1</sup> As a result of the Global strategy, WHO and FAO set up the International Food Safety Authority Network in 2005. The Executive Board at its 124th session proposed food safety as a separate item on the provisional agenda of the Health Assembly.<sup>2</sup> The present report provides an overview of global food safety as well as the opportunities for action and the tools and methods for achieving solutions. It does not deal with food security.

#### **SITUATION OVERVIEW**

2. Food safety and foodborne diseases are a growing public health problem. WHO estimates that foodborne and waterborne diarrhoeal diseases taken together kill about 2.2 million people annually, 1.9 million of them children. A large number of communicable diseases, including emerging zoonotic diseases, are transmitted through food, and many other diseases, including cancers, are also associated with chemicals and pathogens in the food supply. But the full extent of the associated burden of disease and the related cost of unsafe food is not known. Reliable estimates are needed in order to guide food safety management at national and international levels. WHO's Initiative to estimate the Global Burden of Foodborne Diseases from all major causes (microbiological, parasitic and chemical) is designed to provide those estimates.

3. Foodborne disease outbreaks have had devastating health and economic consequences in both developed and developing countries and could hamper achievement of Millennium Development Goal 1 (Eradicate extreme poverty and hunger) and Goal 4 (Reduce child mortality). In addition, economic development in countries that rely on food export as a major economic driver could be seriously affected if the safety of those exports is in question.

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<sup>1</sup> For full details of the Global strategy please visit [www.who.int](http://www.who.int) and click on Health Topics to reach the Food Safety page.

<sup>2</sup> EB124/2009/REC/2, summary record of the eleventh meeting, section 3.

4. The spread of pathogens and contaminants across national borders means that foodborne diseases now threaten global public health security. Recent events related to both chemical contamination (e.g. melamine and dioxin) and microbiological contamination of food products with traditional (e.g. *Salmonella* spp.) or new (Ebola Reston virus) pathogens highlight the global aspect of the problem. However, the application of new methods, such as genetic characterization of pathogens and of bio-marker technology (used to understand the molecular mechanism of action of new medicines in humans) for chemicals in food, opens the way to linking related cases and identifying the specific causes of disease. At the same time, more national and international food standards are being based on a systematic and increasingly statistical approach to microbiological and chemical risk assessment that uses new methods developed by WHO/FAO Expert Groups and the FAO/WHO Codex Alimentarius Commission.

5. It is now clear that many or most new human infectious diseases over recent decades have originated from animals and that transmission has often also been through food. Examples include severe acute respiratory syndrome, bovine spongiform encephalopathy and variant Creutzfeldt–Jakob disease, highly pathogenic avian influenza, and haemorrhagic fevers such as Rift Valley fever.

## **OPPORTUNITIES FOR ACTION**

6. There is now both a need and an opportunity for Member States and the Secretariat to take food safety action to a new level. As food safety issues are international, the solutions must also be international, and all sectors must be involved given that food safety problems may originate in any sector of the food production chain, including in the environment, animal feed, on the farm, production and retail, preparation practices, and even the consumer's kitchen. Efficient multisectoral collaboration will be a prerequisite for food safety, involving all relevant partners at the international and national levels.

7. International agreement on global management of food safety, based on general scientific principles, cross-sectoral collaboration and action at international and national levels, offers many new solutions that rely on efficient exchange of data, good science and practical experience. New integrated approaches as well as linkages between monitoring and surveillance data for animals, food and patients offer the opportunity for scientifically-based action and assessment of the effect of management action. The application of new frameworks and management options to mitigate existing food-related risks could significantly reduce the incidence of foodborne disease over the medium- to long-term.

## **TOOLS AND METHODS**

8. The International Food Safety Authorities Network provides a new vehicle to link and support national authorities in order to enable the sharing of data, knowledge, competence and experience as well as emergency information. It is managed in collaboration with FAO, and presently consists of 176 Member States. Its importance is recognized in the Beijing Declaration on Food Safety of November 2007. The FAO-OIE-WHO Global Early Warning System for Major Animal Diseases, including zoonoses, launched in 2006, shares emergency information between the animal and human health sectors at the international level.

9. The WHO Foodborne Disease Burden Epidemiology Reference Group, established in 2006, is working to assemble burden of disease estimates using summary measures of population health and

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will provide a global report by 2012, based on representative country studies performed using new protocols developed by the group.

10. WHO's new strategic directions in human health aspects of zoonoses focus on strengthening zoonosis surveillance; forecasting and alert and response mechanisms; providing tools for the assessment, management and communication of zoonotic risks; strengthening capacity building; and improving national and international networking and cross-sectoral cooperation. Surveillance requirements for systems to manage antimicrobial resistance in animal, food and human reservoirs are currently being defined. Those requirements reflect WHO's revised list of critically important antimicrobials for human health (developed in collaboration with FAO and OIE).<sup>1</sup> New methods offer the promise of integrated, laboratory-based surveillance and action focused on areas with the highest risk. This can only be achieved through intersectoral collaboration and communication between human health, veterinary and food-related disciplines. The WHO Global Salm-Surv network, set up in 2000 for detecting, controlling and preventing foodborne and other enteric infections, operates to enable such collaboration and communication in 156 Member States.

11. The Secretariat is devising new initiatives to provide scientific advice on both risks and benefits of food, in collaboration with FAO, featuring clear and simple messages for consumers on safety, nutrition and life-style advice, and will be presented to Member States. The WHO training programme on Five Keys to Safer Food<sup>2</sup> is being applied to different target groups in most regions.

12. In the future, data characterizing chemical contamination in food can be combined with national data on food consumption, thus enabling a clear mapping of the exposure of populations to chemical contaminants and chemicals in food. The Global Environment Monitoring System-Food Contamination Monitoring and Assessment Programme<sup>3</sup> provides information on levels, trends and significance of chemical contaminants in food, based on data from all regions of the world. It could be used to present similar data on foodborne pathogens.

13. Sound scientific food safety risk assessment is the basis for policy development and for managing food safety. The need for and complexity of such scientific advice have grown dramatically in recent years. WHO is investigating new ways of ensuring international provision of scientific advice, avoiding the waste of resources caused by repetitive assessments in countries or regions.

## **ACTION BY THE HEALTH ASSEMBLY**

14. The Health Assembly is invited to note the report.

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<sup>1</sup> *Critically important antimicrobials for human medicine: categorization for the development of risk management strategies to contain antimicrobial resistance due to non-human antimicrobial use. Report of the second WHO Expert Meeting, Copenhagen, 29–31 May 2007.* Geneva, World Health Organization, 2007.

<sup>2</sup> See [www.who.int/foodsafety/consumer/](http://www.who.int/foodsafety/consumer/).

<sup>3</sup> See [www.who.int/foodsafety/chem./gems/](http://www.who.int/foodsafety/chem./gems/).