

1. WESTERN PACIFIC REGION

The Western Pacific Region faces a wide array of food safety problems. Some countries in the Western Pacific Region have well-developed food safety programs, but others have no specific written policies.¹ Many countries lack adequate resources to ensure full enforcement of food regulations. Australia and New Zealand are wealthy nations that rely heavily on agricultural exports to fuel their economies, so their programs tend to be better developed. In 2001, the 52nd session of the Regional Committee of WHO recognized food safety as a significant public health issue and endorsed a regional strategy.



1.1 Foodborne diseases in the Western Pacific Region

The Western Pacific Region has experienced a number of serious outbreaks, including at least one recent instance of intentional contamination of the food supply:

- In 2002, in China, more than 200 schoolchildren were sickened and 38 died from the intentional contamination of bakery products after a competitor put rat poison into the breakfast snacks of a restaurant in Tangshan, a suburb of Nanjing.²
- In 2000, food poisoning linked to milk products produced in the Osaka factory of the Snow Brand Company sickened 14,780 persons, making this one of Japan's largest food poisoning outbreaks ever.³
- In a 1996 Japanese outbreak, at least 9,578 individuals (mainly schoolchildren) suffered from severe *Escherichia coli* infections linked to white radish sprouts.⁴
- In 1988, a *Hepatitis A* epidemic in China associated with the consumption of clams affected some 292,000 people, killing nine of them.⁵

The Western Pacific Region consists of the following countries:

American Samoa, Australia, Brunei Darussalam, Cambodia, China, Cook Islands, Fiji, French Polynesia, Guam, Hong Kong, Japan, Kiribati, North Korea, South Korea, Republic of Lao PDR, Macao, Malaysia, Mariana Islands, Marshall Islands, Micronesia, Mongolia, Nauru, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Samoa, Singapore, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Viet Nam, and Wallis and Futuna.

There is considerable evidence to show that foodborne illnesses due to biological hazards are increasing in the Western Pacific Region. Numerous foodborne pathogens are on the rise, including *Campylobacter*, enterohemorrhagic *Escherichia coli*, *Cyclospora*, and *Listeria*.⁶ Recent

infections have also been linked to new strains of *Vibrio cholerae* (O139) and drug-resistant strains of several enteric pathogens, particularly *Salmonella*. (See Box.^{7,8,9})

Illness by the numbers

In Australia alone, among a population of about 19.7 million, there are an estimated 5.4 million cases of foodborne gastroenteritis each year.

In the Philippines and Pacific Island countries, high rates of diarrhea and gastroenteritis are also reported every year, despite these countries having a limited capacity to monitor foodborne illnesses. Between 1996 and 1999, the Pacific Island countries reported more than one case per 100 individuals per year.

In China, foodborne diseases are the most common, followed by chemical foodborne diseases.

Chemical contamination of food also is prevalent. For example, Viet Nam reports a high burden of disease associated with pesticide residues.¹⁰ Many Pacific Island countries report that ciguatera poisoning, a chemical hazard in finfish, is common.¹¹ Another serious hazard, botulism, is sporadically reported in the Western Pacific Region, most frequently in association with fermented food and sausages.¹²

The lack of food safety education of producers and consumers is often an issue. For example, in Cambodia, in 1996 and 1998, 70 deaths were linked to the drinking of rice wine that had been mixed with pesticides to make it stronger.¹³

Diseases carried by live animals and poultry also present a risk to consumers in the Western Pacific Region. A 1998 outbreak of Nipah virus in Malaysia

killed 105 people. Nipah virus is typically associated with pigs and pork. Recently, a strain of avian influenza (“bird flu”) emerged in the Western Pacific Region. This bird flu has caused deaths and illnesses in persons that either have close contact with sick birds or who cared for sick family members. Those outbreaks severely affected both public health and the trade of animal and meat products in those areas.¹⁴

Moreover, in February 2005, for the first time in the Western Pacific Region, a human case of mad cow disease was confirmed in Japan.¹⁵

1.2 Food safety concerns in the Western Pacific Region

WHO studies cite many factors that contribute to foodborne illness in the Western Pacific Region. Those include:

- Intensive farming practices, including the use of both slaughter byproducts and animal waste as feed; the misuse of antibiotics, pesticides and growth hormones; and mass slaughtering and processing to meet increased population demands.

- Unsafe aquaculture practices, including harvesting fish from polluted water, and illegal uses of poisons and dynamite.

SOUTH KOREA¹⁶



In South Korea, although food hygiene has been improving, the numbers of foodborne illness outbreaks and cases appear to have increased, triggering growing concern among both the doctors and consumers. (See Table 1.) While food poisoning used to be reported mostly in the summer, it is now reported all year long. Outbreaks in restaurant and school meals have increased tremendously with the development of the food-service and restaurant industries.

Table 1. Foodborne illness outbreaks and cases

Year	1996	1998	2000	2002	2003
Outbreaks	81	119	104	78	135
Cases	2,797	4,577	7,269	2,980	7,909

The major microorganisms causing foodborne illness are changing. (See Table 2.) *Salmonella spp.*, *Staphylococcus aureus*, and *Vibrio parahaemolyticus* have been the three major foodborne bacteria in South Korea for a long time. More recently, a virus (Norovirus) has emerged as an important agent. The failure to identify the causative agents of many outbreaks makes it difficult for the Korea Food and Drug Administration to implement food control or preventative plans efficiently.

Table 2. Major causative agents of foodborne illness outbreaks, 2003

	<i>Salmonella</i>	<i>V. parahaemolyticus</i>	<i>S. aureus</i>	Norovirus	Unknown
Outbreaks	416	732	808	1,442	2,180
Rate	5.3%	9.3%	10.2%	18.2%	27.6%

- Widespread distribution of contaminated foods when problems occur in larger processing operations with extensive distribution systems.
- New packaging and processing technologies that are improperly applied to extend the shelf life of food.

- Failure of some Pacific Island communities to address marine toxin issues associated with the harvesting of particular fish species.
- Rapid urbanization, leading to a lack of waste disposal, safe water, and sanitation facilities.
- Consumer demand for (1) reductions in the use of food additives, including preservatives, and (2) increased access to ready-to-eat and fast food.
- Limited access to education and limited decision-making power at the household level for women, who are often the food handler.
- Increasing international trade in food and feed and large-scale movements of people across national borders as tourists, refugees, and workers.¹⁷
- Lack of adequate food labeling regulations regarding both locally-produced and imported food products.

Rapid urbanization and population growth have contributed to significant growth in sales of street-vended food in the Western Pacific Region. Street foods often pose significant food safety problems, owing to:

- *The lack of basic infrastructure and services, such as potable water supplies and refrigeration*
- *Difficulty in controlling the large numbers of street food vending operations because of their diversity, mobility, and temporary nature*
- *Street vendors lack knowledge of basic food safety measures*
- *Inadequate public awareness of risks posed by certain street foods*

1.3 Policies and plans of action in the Western Pacific Region

Many governments in the Western Pacific Region have no specific written policies on food safety. Consequently, strategies and plans of action are frequently developed from a general health perspective and may address food safety only briefly - if at all. Food safety plans often do not have a clearly articulated goal within the context of government policy. Additionally, different government agencies often claim the same

jurisdiction over matters of food safety. That has resulted in some countries having an excessively complex web of laws and regulations addressing food safety, while other countries lack any laws or standards for their food.¹⁸

Coordination of inspection activities in the Western Pacific Region is limited, with industry either facing multiple inspections or being free of

comprehensive inspections altogether. There are insufficient numbers of inspectors to implement the national programs effectively. Even when inspectors are present, they are often inadequately trained, and the system of monitoring how inspection affects food safety is limited. In 1999, the New Zealand Food Safety Authority (NZFSA) implemented a performance-based verification program for many processed foods where the frequency and intensity of inspections is based on the food safety risk involved with the product and the performance of the producers.¹⁹

For export certification, many countries have well-developed programs. However, that sometimes results in higher standards for products being exported than for those same products sold domestically.²⁰

The national capacity to conduct laboratory analyses of food also varies across the Western Pacific Region. While some countries are not able to isolate or identify common foodborne pathogens and chemical hazards in food, others have highly developed systems. In Australia, for example, the nature of foodborne disease investigations has changed significantly: more complicated and wide-ranging investigations are becoming normal; outbreaks are more geographically widespread than in the past; smaller outbreaks are being identified; and more outbreaks are identified that involve contaminated products originating from overseas.²¹

Moreover, many governments are decentralizing their laboratory systems, but that can create numerous state, provincial and municipal laboratories, many of which lack adequate technical and financial resources. (See Box. ^{22,23,24})

Monitoring programs are undertaken in a minority of the Western Pacific Region's countries and usually cover only a limited

Foodborne disease surveillance systems in the Western Pacific Region

In China, a National Food Contamination Monitoring and Foodborne Disease Surveillance System has been established since 2001; there are more than 70 surveillance points among 13 provinces in China, but they cover only about 643 million people.

Fiji recently developed a national collaborative non-Typhi *Salmonella* surveillance and laboratory support program.

Japan has two surveillance systems for foodborne diseases: one is for cases of food poisoning, and the other is for pathogens that cause food poisoning (surveillance of infectious diseases).

In Malaysia, notification of certain priority foodborne diseases is mandatory, and surveillance data is collected mostly through physician-based outbreak investigations. Laboratories, however, are not required to provide any notification. The Department of Veterinary Services (DVS) also conducts a national surveillance program for foodborne pathogens associated with livestock products, including *Salmonella*, *Escherichia coli* O157:H7, *Campylobacter*, *Yersinia* and Vancomycin-resistant *Enterococci* (VRE).

In the Philippines, a laboratory-surveillance project for foodborne pathogens has been started in conjunction with existing surveillance programs. The systems are independent of each other and the data are not yet integrated. The project aims to integrate these programs to create a foodborne disease surveillance system that will include antimicrobial resistance data.

Viet Nam is conducting a study to enhance its capacity to conduct foodborne disease surveillance and determine the burden of such diseases.

range of contaminants. Data on pesticides, heavy metals, and mycotoxins are collected most often. Laboratory quality assurance programs are also often non-existent.

For some countries, foodborne illness reporting is required by law, but surveillance systems are not adequately developed. For others, notification of foodborne illnesses is not required.

Few governments have training programs for industry personnel aimed at introducing modern food safety concepts based on process control (Hazard Analysis and Critical Control Point systems) principles.²⁵

BSE IN JAPAN

Following discovery of the first case of BSE in 2001, the Japanese



government introduced a series of measures to ensure the safety of beef in the market, including the following:

- *Immediate suspension of all shipment of any cattle 30 months of age or older throughout the entire nation*
- *Removal and incineration of the specified risk materials (SRM) from cows at or over 12 months of age*
- *Removal of the SRM and the implementation of screening tests of all cattle entering the food chain regardless of age*

Only a few countries in the Western Pacific Region encourage both industry and consumers to participate in food safety programs or in the development of food standards.²⁶ And while consumers are targeted for training and education, governments often do not consider consumer organizations to be a source of knowledge or effective agents of change in relation to food safety.

In order to improve food safety communication and coordination at the regional level, the Association of South East Asian Nations (ASEAN)²⁷ has launched the ASEAN Food Safety Network.²⁸ Australia and New Zealand have launched Food Standards Australia New Zealand (FSANZ), a bi-national independent statutory authority that develops food standards for composition, labeling, and contaminants, including microbiological limits, that apply to all foods produced or imported for sale in Australia and New Zealand.

1.4 Consumer organizations in the Western Pacific Region

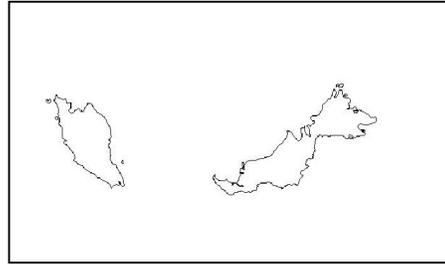
Consumer organizations in the Western Pacific Region have been very active in educating consumers about food safety issues. They are working to develop food safety laws, promote food labeling to allow consumers to make more informed choices, and educate consumers on food-related issues through special consumer projects and reports, magazines, and newsletters.

National consumer organizations in the Western Pacific Region also conduct product testing to determine the safety, cleanliness, and quality of many foods. Those tests have exposed products with dangerous levels of dyes, heavy metals, and additives, as well as antibiotic residues in fresh fish and seafood.

MALAYSIA²⁹

Food safety administration in Malaysia

Food safety responsibilities are shared between the central, state, district, and local authorities. Within the Ministry of Health, the Food Quality Control Unit, which was established in 1974, is responsible for:



- overall technical supervision of food safety activities
- formulation of legislation
- codes of practice and guidelines
- determination of food safety policies
- adoption of food sampling and food premises inspection strategies
- coordination of activities at the state and district levels

Food safety regulations

The Food Act 1983 (Act 281 of the Laws of Malaysia) and its associated regulations are the main instruments governing food safety in Malaysia. Those regulations deal with such subjects as food hygiene, labeling, food imports and exports, advertising and laboratories. They specify numerous detailed food-safety standards.

Causes of food poisoning in Malaysia

Botulism, unspecified food poisoning, and illnesses due to *Staphylococcus aureus*, *Salmonella*, *Vibrio parahaemolyticus*, *Clostridium perfringens*, and *Bacillus cereus* are the main foodborne diseases in Malaysia.