



Food and Agriculture  
Organization of the  
United Nations



World Health  
Organization

# INFOSAN ACTIVITY REPORT

# 2018 | 2019



INTERNATIONAL  
FOOD SAFETY  
AUTHORITIES  
NETWORK





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INFOSAN activity report 2018-2019

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# Foreword

Safe food is critical, not only for better health, improved livelihoods and food security, but also for economic development, trade and the international reputation of every country. Unfortunately, unsafe food poses a significant burden to public health with an estimated 1 in 10 people falling ill each year and resulting in 420,000 deaths annually.

The 2018/2019 biennium has been marked by several high-profile occasions that have emphasized the significance of food safety for public health.

At the First FAO/WHO/AU *International Food Safety Conference* in February 2019 (Addis Ababa, Ethiopia), food safety priorities were discussed to ensure that strategies and approaches can be aligned across sectors and borders, reinforcing efforts to reach the Sustainable Development Goals and supporting the United Nations Decade of Action on Nutrition. The need for increased and better coordinated collaboration and support to improve food safety globally was reinforced.

A few months later, in April 2019, the *WTO International Forum on Food Safety and Trade* (Geneva, Switzerland) addressed the trade-related aspects and challenges of food safety. The recommendations from both the Addis Conference and the Geneva Forum, are intended to better align and coordinate efforts to strengthen food safety systems across sectors and borders.

Then on 7 June 2019, the first ever World Food Safety Day was celebrated to draw attention and inspire action to help prevent, detect and manage foodborne risks, contributing to food security, human health, economic prosperity, agriculture, market access, tourism and sustainable development.

INFOSAN members, supported by the Secretariat, will play an integral role in achieving the ambitious goals highlighted by these global events. Ensuring food safety is therefore a shared responsibility that must be addressed through close collaboration across sectors at national level and with the establishment of functional links between food safety authorities everywhere.

This is especially important in our increasingly globalized world, where a local outbreak of foodborne illness can rapidly evolve into an international food safety crisis.

Since its creation in 2004, INFOSAN has facilitated the rapid exchange of information across borders and between members, during hundreds of food safety incidents.

During the past 15 years, we have witnessed foodborne outbreaks getting larger, affecting more countries, and we have seen food distribution patterns getting longer and increasingly complex. During the same period, communication, traceability and information sharing technologies as well as epidemiological tools have also evolved – reshaping the way foodborne disease outbreaks and sporadic cases of foodborne illness are detected, linked and managed across borders. These trends have highlighted the important role of INFOSAN and the necessity of working together to halt the international spread of contaminated food.

INFOSAN will continue to play an important role in supporting such efforts. FAO and WHO count on the commitment and support from dedicated INFOSAN members around the world to do so.



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## Abbreviations

AMRO	WHO Regional Office for the Americas
ASEAN	Association of Southeast Asian Nations
AU	African Union
CFIA	Canadian Food Inspection Agency
CPLP	Community of Portuguese Language Countries
ECCP	European Commission Contact Point
ECDC	European Centre for Disease Prevention and Control
EFSA	European Food Safety Authority
EREN	Emerging Risks Exchange Network
EU	European Union
EURO	WHO Regional Office for Europe
FAO	Food and Agriculture Organization of the United Nations
IAFP	International Association for Food Protection
ICW	INFOSAN Community Website
IHR (2005)	International Health Regulations (2005)
INFOSAN	International Food Safety Authorities Network
RASFF ECCP	RASFF European Commission Contact Point
RASFF	Rapid Alert System for Food and Feed
SAR	Special Administrative Region
SEARO	WHO Regional Office for South-East Asia
UAE	United Arab Emirates
United Kingdom	United Kingdom of Great Britain and Northern Ireland
USA	United States of America (the)
WGS	Whole Genome Sequencing
WHO	World Health Organization
WPRO	WHO Regional Office for the Western Pacific
WTO	World Trade Organization



# Executive Summary

## INFOSAN in 2018 and 2019

### Highlights from 2018 and 2019

- INFOSAN was active during 162 global food safety events, involving countries and territories across all regions in 2018 and 2019.
- National capacities for food safety emergency management were strengthened through a series of webinars and simulation exercises in multiple languages.
- Strategic partnerships were forged with several international networks and initiatives.
- Active membership was increased, especially through targeted efforts in Africa and the Eastern Mediterranean.
- Study of INFOSAN was launched to better understand member experiences, encourage more active participation and improve program delivery in the future.
- The second global meeting of INFOSAN members was held in 2019, bringing together more than 285 participants from over 135 countries.
- The INFOSAN Secretariat Strategic Plan 2020-2025 was published to guide future activities.

Since launching in 2004, activities of the International Food Safety Authorities Network (INFOSAN) have strengthened national and international food safety systems by fostering communication across sectors and disseminating important food safety information of global relevance. INFOSAN has continued to grow and develop throughout the past biennium, forging functional links with regional food safety networks and initiatives, and building on a strong global reputation for efficiency and effectiveness, especially in the context of international food safety emergency response.

In the 2018/2019 biennium, the INFOSAN Secretariat responded to 162 international food safety events – nearly double the number of events responded to in any previous biennium. During these events, the INFOSAN Secretariat facilitated communication and the sharing important food safety information among Network members. This allowed countries to remove contaminated food from international and domestic markets, thereby mitigating the risk of foodborne disease outbreaks around the world. Biological hazards were responsible for the largest number of INFOSAN events, the most common of which was *Salmonella* spp. This remains consistent with hazards involved during INFOSAN food safety events during the previous biennium. Events most commonly involved milk and dairy products, followed by meat and meat products and fish and

other seafood. The average time the INFOSAN Secretariat remained actively engaged with an event was 10 days (compared to 28 days during the previous biennium). The majority of the 162 events involved Member States in the European Region, followed by the Western Pacific Region, the Region of the Americas, the Eastern Mediterranean Region, the African Region, and the South-East Asia Region, respectively.

To strengthen national capacities, the INFOSAN Secretariat supported efforts in Tunisia and Ghana by facilitating national, multi-sectoral workshops that focused on building functional links between national agencies involved in food safety to better address food safety emergency response.

One priority for the biennium was to continue to engage in regional initiatives to enhance participation in INFOSAN. Regional efforts to strengthen INFOSAN in the Americas and Asia were sustained and included successful simulation exercises in English, French, Spanish and Portuguese. In addition, the fifth and sixth regional meetings of INFOSAN members from the Americas were held in Mexico in 2018 and in the United Arab Emirates (UAE) in 2019 respectively. The fifth regional meeting of INFOSAN members from Asia was held in the UAE in 2019.

During the biennium, an important strategic objective for INFOSAN was to strengthen collaborative partnerships with other international networks, initiatives and agencies working towards common goals. The INFOSAN Secretariat continued to collaborate on activities organized by the Community of Portuguese Language Countries (CPLP), the European Food Safety Authority's (EFSA) Emerging Risks Exchange Network (EREN), and the Arab Food Safety Initiative for Trade Facilitation (Arab SAFE). Leveraging existing tools and momentum to amplify the work of INFOSAN through functional links to other programs and networks has proven mutually beneficial for achieving common goals in the face of limited financial and human resources.

Membership to INFOSAN has continued to grow during the 2018/2019 biennium, increasing by 8 percentage points with notable growth in the Eastern Mediterranean Region and in the African Region; 89% of all WHO Member States now have an active INFOSAN Emergency Contact Point. To support new members the INFOSAN Secretariat continued to offer training opportunities, including the use of webinars conducted in English, French, Spanish and Portuguese, to provide orientation to new members.

The INFOSAN Community Website is the main platform through which members communicate with each other and the INFOSAN Secretariat which now supports more than 600 users globally. Members have continued to utilize the discussion forum to ask questions and share information, particularly on food safety events of international concern.

As observed in past years, several food safety events captured headlines around the globe in 2018 and 2019, with news reports citing INFOSAN as a source of information that prompted national authorities to act or recognizing the Network for its information-dissemination activities. Increasingly, '#INFOSAN' is being used by members on social media to refer to Network activities, including during emergencies, increasing the visibility of the Network.

To prioritize future interventions by the INFOSAN Secretariat to improve member engagement, a broad and deep understanding of the barriers and enablers to active participation will be required. In addition, it will be important to elicit members' perceptions of the utility of INFOSAN as a global communication tool for information exchange and the prevention of foodborne illness, especially during international food safety emergencies. As such, an in-depth study of members' experiences was launched in 2019 which is investigating members' participation in Network activities. The study will allow the INFOSAN Secretariat to better understand and measure the impact of the Network at the country-level and focus on addressing any critical gaps that are identified. Results from the study have already been discussed in regional breakout groups at the Second Global Meeting of INFOSAN Members in Abu Dhabi, UAE in December 2019.

Encouraging the active participation of INFOSAN members continues to be a top priority. During the 2020/2021 biennium, the INFOSAN workplan will continue to focus on:

1. the promotion of cross-sectoral collaboration and information sharing to optimize response to foodborne health risks, including outbreaks; and
2. the development of countries' capacities to manage food safety risks (which includes the establishment and refinement of systems to monitor, assess and manage food safety incidents and emergencies).

These activities will be undertaken in consultation with the INFOSAN Advisory Group in accordance with the new INFOSAN Secretariat Strategic Plan 2020-2025.<sup>1</sup>

*“ In the past we have used INFOSAN to deliver information to countries outside of the European Union (EU) during outbreaks. We have also relied on INFOSAN to get more information from non-EU countries when outbreaks involve foods imported into the EU. INFOSAN has the strong support of FAO and WHO behind it and will only continue to grow and link countries together to improve food safety. ”*



**Jan Hoffbauer**  
Federal Office of Consumer Protection  
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INFOSAN Emergency Contact Point  
Germany

Photo credit: © Mr Hoffbauer

<sup>1</sup> <https://www.who.int/publications/i/item/9789241516457>

## Introduction

The publication of the WHO's estimates of the global burden of foodborne diseases in 2015<sup>2</sup> provides a stark reminder of the high morbidity and mortality wrought by preventable foodborne illnesses around the world. With our increasingly globalized food supply, contaminated food produced in one country can easily cause illness in other countries, where failures in food safety systems result in unsafe food entering the international market.

The total productivity loss associated with foodborne disease in low- and middle-income countries is estimated to cost \$95.2 billion USD per year, and the annual cost of treating foodborne illnesses is estimated at \$15 billion USD. Other costs, though harder to quantify, include losses of farm and company sales, foregone trade income, the health repercussions of consumer avoidance of perishable yet nutrient-rich foods, and the environmental burden of food waste.

INFOSAN has been connecting national authorities worldwide since 2004. Its goal has been to prevent the international spread of contaminated food and foodborne disease and strengthen food safety systems globally. This has been done by:

1. promoting the rapid exchange of information during food safety events;
2. sharing information on important food safety issues of global interest;
3. promoting partnership and collaboration between countries and networks; and
4. helping countries to strengthen their capacity to manage food safety emergencies.

Since its inception, the INFOSAN Secretariat has facilitated international communications between members during hundreds of food safety events; including 162 during the 2018/2019 biennium, double the number of events dealt with in the previous biennium.

This INFOSAN Activity Report provides an overview of the major events, activities and information products relating to INFOSAN in 2018/2019. The report highlights some achievements from the biennium, as well as challenges to overcome and areas for improvement. INFOSAN aims to be a member-driven network and thus a united and sustained effort must be made by all INFOSAN members for the Network to reach its full potential.

<sup>2</sup> Further reading: <https://www.who.int/activities/estimating-the-burden-of-foodborne-diseases>

## INFOSAN Activities

### FOOD SAFETY INCIDENT RESPONSE ACTIVITIES

INFOSAN has been operational during 162 food safety events during the 2018/2019 biennium. The level of engagement by the INFOSAN Secretariat in each event varies depending on several factors including the countries involved, the severity of the public health impact, and the duration of the event. In some cases, the INFOSAN Secretariat plays a facilitating role, ensuring that affected members have access to each other's contact details. In other cases, the INFOSAN Secretariat provides technical advice or information to an INFOSAN member regarding a food safety event or issue. In many cases, the INFOSAN Secretariat will request information from INFOSAN Emergency Contact Points following the receipt of information about a food safety event of potential international concern. During complex events involving multiple countries, the INFOSAN Secretariat actively obtains and disseminates information to and from INFOSAN members regarding food safety events of international concern. A short summary of each food safety event is posted on the INFOSAN Community Website. In some cases, an INFOSAN Global Alert will also be posted and the entire membership will be notified.

### INFOSAN EMERGENCY INVOLVEMENT IN 2018/2019

Overall, the INFOSAN Secretariat was involved in 162 events during the 2018/2019 biennium (see Appendices A and B). The average time that the INFOSAN Secretariat remained actively engaged with an event was 10 days, with a minimum of one day and a maximum of 126 days (median = 6 days). There were 110 events involving a biological hazard, 29 involving a physical hazard, 11 involving a chemical hazard, 11 involving an undeclared allergen and one involving an unspecified hazard.

For events involving a biological hazard, *Salmonella* spp. was most commonly responsible (41 events in 2018/2019). These were followed by *Listeria monocytogenes* (22), *Escherichia coli* (13), Norovirus (6), *Clostridium* spp. (5), Hepatitis A virus (4), unspecified biological hazards (4), *Vibrio* spp. (3), *Bacillus* spp. (2), *Cronobacter sakazakii* (2), *Cyclospora cayetanensis* (2), *Anisakis* (1), Mycotoxins (1), *Pseudomonas* spp. (1) and *Staphylococcus aureus* (1). With regards to chemical hazards, events involving excess amounts of heavy metals occurred most frequently (5), other chemical hazards responsible for food safety events were Iodine (2), Ciguatera toxin (1), Histamine (1), Hydrogen cyanide (1), Methanol (1), Boron (1) and an unspecified hazard (1).

The food categories most commonly involved in the 162 events in 2018/2019 were milk and dairy products (23), fish and other seafood products (19), snacks, desserts and other foods, (15) and meat and meat products (14).

For a Member State to be considered involved in an INFOSAN event, this means that:

- I. potentially contaminated food was possibly imported to or exported from that Member State; or
- II. cases of foodborne illness linked to internationally distributed, contaminated food were reported in that Member State

The majority of the 162 events in 2018/2019 involved Member States in the European Region (92), followed by the Western Pacific Region (90), the Region of the Americas (80), the Eastern Mediterranean Region (34), the African Region (23) and the South-East Asia Region (21).

Most event notifications in 2018/2019 were reported to the INFOSAN Secretariat by an INFOSAN Emergency Contact Point or Focal Point (64), followed by the RASFF European Commission Contact Point (RASFF ECCP; 54). Other notifications were made by WHO headquarters event-based surveillance (25), European Centre for Disease Prevention and Control (ECDC) (8), WHO Regional Office for Europe (EURO) (4), WHO Regional Office for the Americas (AMRO) (3), FAO Food Safety and Quality Unit (2), and WHO Regional Office for the Western Pacific (WPRO) (2).

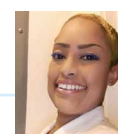
Tables 1-8 provide an overview of food safety events during which INFOSAN was active by region, food category, hazard, and source of notification in 2018/2019.

**TABLE 1**  
FOOD SAFETY EVENTS BY REGION\*, 2015-2019

REGION	2019 N= 84 EVENTS n (%)	2018 N= 78 EVENTS n (%)	2017 N = 44 EVENTS n (%)	2016 N = 40 EVENTS n (%)	2015 N = 37 EVENTS n (%)
African Region	14 (17%)	9 (11%)	9 (20%)	3 (7%)	5 (14%)
Region of the Americas	47 (56%)	33 (42%)	26 (59%)	16 (40%)	17 (46%)
Eastern Mediterranean Region	18 (21%)	16 (21%)	6 (14%)	1 (2%)	7 (19%)
European Region	50 (60%)	42 (54%)	19 (43%)	22 (55%)	18 (49%)
South-East Asia Region	12 (14%)	9 (11%)	5 (11%)	5 (12%)	7 (19%)
Western Pacific Region	41 (49%)	49 (63%)	21 (48%)	12 (30%)	15 (41%)

\* Multiple regions are often involved in the same event.

*“ INFOSAN serves a very important role for the Ministry of Health in the Bahamas. It has brought stakeholders involved in food safety closer together and provided critical information during many food safety incidents. I encourage other professionals from around the world to join INFOSAN today. ”*



Joanna Bethel-Chambers  
Ministry of Health  
INFOSAN Emergency Contact Point,  
Bahamas

**TABLE 2**  
FOOD SAFETY EVENTS BY FOOD CATEGORY, 2015-2019

FOOD CATEGORY	2019 N=84 EVENTS n (%)	2018 N = 78 EVENTS n (%)	2017 N = 44 EVENTS n (%)	2016 N = 40 EVENTS n (%)	2015 N = 37 EVENTS n (%)
Alcoholic beverages	2 (2%)	-	1 (2%)	1 (2%)	1 (3%)
Animal feed	-	-	-	-	-
Cereals and cereal-based Products	2 (2%)	2 (3%)	2 (4%)	3 (7%)	2 (5%)
Composite food	2 (2%)	-	-	-	2 (5%)
Drinking water	-	-	-	-	-
Eggs and egg products	-	1 (1%)	2 (4%)	1 (2%)	-
Fats and oils of animal and vegetable origin	-	-	-	-	2 (5%)
Fish and other seafood	9 (11%)	10 (12%)	11 (25%)	9 (23%)	7 (19%)
Food additive	-	-	-	-	-
Foods for infants and small Children	1 (1%)	5 (6%)	3 (7%)	-	-
Fruit and fruit products	-	8 (10%)	3 (7%)	2 (5%)	5 (14%)
Herbs, spices and Condiments	9 (11%)	8 (9%)	2 (4%)	2 (5%)	2 (5%)
Legumes and pulses	1 (1%)	-	3 (7%)	3 (8%)	-
Meat and meat products	9 (11%)	5 (6%)	4 (9%)	3 (8%)	5 (14%)
Milk and dairy products	15 (18%)	8 (9%)	3 (7%)	3 (8%)	1 (3%)
Non-alcoholic beverages	-	2 (2%)	1 (2%)	-	1 (3%)
Nuts and oilseeds	6 (7%)	6 (7%)	2 (4%)	2 (5%)	-
Products for special nutritional use	3 (4%)	2 (2%)	2 (4%)	1 (2%)	-
Snacks, desserts and other foods	7 (8%)	8 (9%)	3 (7%)	-	1 (3%)
Starchy roots and tubers	1 (1%)	-	-	-	-
Sugar and confectionary	2 (2%)	5 (6%)	-	2 (5%)	1 (3%)
Unknown	-	3 (3%)	-	3 (8%)	4 (11%)
Vegetables and vegetable Products	6 (7%)	5 (6%)	2 (4%)	5 (12%)	3 (8%)

**TABLE 3**  
FOOD SAFETY EVENTS BY HAZARD CATEGORY, 2015-2019

HAZARD	2019 N = 84 EVENTS n (%)	2018 N = 78 EVENTS n (%)	2017 N = 44 EVENTS n (%)	2016 N = 40 EVENTS n (%)	2015 N = 37 EVENTS n (%)
Biological	55 (65%)	55 (68%)	28 (64%)	30 (75%)	22 (59%)
Chemical	4 (5%)	7 (8%)	7 (16%)	5 (12%)	8 (22%)
Other	1 (1%)	-	-	-	-
Physical	18 (21%)	11 (13%)	1 (2%)	3 (8%)	3 (8%)
Undeclared allergen	6 (7%)	5 (6%)	3 (7%)	-	3 (8%)
Unknown	-	-	5 (11%)	2 (5%)	1 (3%)

**TABLE 4**  
**FOOD SAFETY EVENTS INVOLVING BIOLOGICAL HAZARDS, 2015-2019**

BIOLOGICAL HAZARD	2019 N = 55 EVENTS n (%)	2018 N = 55 EVENTS n (%)	2017 N = 28 EVENTS n (%)	2016 N = 30 EVENTS n (%)	2015 N = 22 EVENTS n (%)
<i>Anisakis</i>	-	1 (2%)	1 (4%)	-	-
<i>Bacillus</i> spp.	1 (2%)	1 (2%)	-	2 (7%)	1 (5%)
<i>Brucella</i> spp.	-	-	-	1 (3%)	-
<i>Campylobacter</i>	-	-	-	2* (7%)	-
<i>Clostridium</i> spp.	2 (4%)	3 (5%)	4 (14%)	5 (17%)	4 (18%)
<i>Cronobacter sakazakii</i>	-	2 (3%)	1 (4%)	-	-
<i>Cyclospora cayetanensis</i>	1 (2%)	1 (2%)	-	1 (3%)	2 (9%)
<i>Datura stramonium</i>	-	-	-	-	-
Dead lizard	-	-	-	-	-
<i>Escherichia coli</i>	9 (16%)	4 (7%)	4 (14%)	2 (7%)	1 (5%)
Hepatitis A virus	2 (4%)	2 (4%)	1 (4%)	3 (10%)	2 (9%)
Influenza A virus (H7N9)	-	-	-	-	-
<i>Listeria monocytogenes</i>	14 (25%)	8 (15%)	5 (17%)	2 (7%)	3 (14%)
Norovirus	4 (7%)	2 (3%)	1 (4%)	2* (7%)	3 (14%)
Potential microbial contamination due to packaging defects	-	1 (2%)			
<i>Pseudomonas</i> spp.	-	1 (2%)	-	-	-
<i>Rhizopus oryzae</i>	-	-	-	-	-
Rodent infestation	-	1 (2%)	-		-
<i>Salmonella</i> spp	19 (34%)	22 (40%)	11 (39%)	10* (30%)	4 (18%)
Schmallenberg virus	-	-	-	-	-
<i>Shigella</i> spp.	-	-	-	-	1 (5%)
<i>Staphylococcus aureus</i>		1 (2%)	-	-	-
<i>Trichinella</i>	-	-	-	-	-
Unknown	1 (2%)	3 (5%)	-	1 (3%)	1 (5%)
Contamination due to under processing	-	1 (2%)	-		
<i>Vibrio</i> spp.	2 (4%)	1 (2%)	-	1 (3%)	-
<i>Yersinia pseudotuberculosis</i>	-	-	-	-	-

\* 1 event involved *Campylobacter*, Norovirus and *Salmonella Enterica* spp. in 2016



**TABLE 5**  
FOOD SAFETY EVENTS INVOLVING CHEMICAL HAZARDS, 2015-2019

CHEMICAL HAZARD	2019 N = 4 EVENTS n (%)	2018 N = 7 EVENTS n (%)	2017 N = 7 EVENTS n (%)	2016 N = 5 EVENTS n (%)	2015 N = 8 EVENTS n (%)
Aflatoxin	-	-	1 (14%)	1 (20%)	-
Arsenic	-	1 (1%)	-	-	-
Atropine	-	-	-	-	-
Boron	-	1 (1%)	-	-	-
Chloramphenicol	-	-	-	-	-
Ciguatera toxin	1 (25%)	-	-	-	-
Cocaine	-	-	-	-	-
Copper	-	1a (1%)	-	-	-
Deoxynivalenol (DON)	-	-	-	-	1 (13%)
Dicyandiamide	-	-	-	-	-
Dimethyl yellow	-	-	-	-	-
Fipronil	-	-	1 (14%)	-	-
Formalin	-	-	-	-	-
Heavy metals	-	-	-	-	1* (13%)
Histamine	-	1 (1%)	-	1 (20%)	1 (13%)
Hydrogen cyanide	1 (25%)	-	-	-	-
Hydrogenated oils	-	-	-	-	1 (13%)
Iodine	-	2 (3%)	-	-	-
Lead	-	2a (3%)	-	1 (20%)	-
Mercury	-	1a (1%)	1 (14%)	1 (20%)	-
Methanol	1 (25%)	-	-	1 (20%)	1 (13%)
Monosodium glutamate	-	-	-	-	1* (13%)
Nitrates	-	-	-	-	-
Organophosphate	-	-	-	-	-
Oxedrine	-	-	-	-	-
Oxyphenylbutazone	-	-	1 (14%)	-	-
Paralytic shellfish toxin	-	-	1 (14%)	-	1 (13%)
Pesticide residues	-	-	-	-	-
Phosphate	-	-	1 (14%)	-	-
Phenylbutazone	-	-	-	-	-
Phthalates/polycyclic aromatic hydrocarbons	-	-	-	-	1 (13%)
Plastic	-	-	-	-	1 (13%)
Rat poison	-	-	-	-	-
Scopolamine	-	-	-	-	-
Unknown	1 (25%)	-	1 (14%)	-	-
Waste oil	-	-	-	-	-

\* 1 event involved both heavy metals and monosodium glutamate in 2015

TABLE 6

FOOD SAFETY EVENTS INVOLVING PHYSICAL HAZARDS, 2015-2019

PHYSICAL HAZARD	2019 N = 18 EVENTS n (%)	2018 N = 11 EVENTS n (%)	2017 N = 1 EVENTS n (%)	2016 N = 3 EVENTS n (%)	2015 N = 3 EVENTS n (%)
Choking hazard	-	1 (1%)	-	-	-
Glass	6 (17%)	3 (3%)	1 (100%)	-	2 (67%)
Packaging material	-	-	-	1 (33%)	-
Plastic	6 (17%)	-	-	1 (33%)	-
Metal	6 (17%)	7 (64%)	-	1 (33%)	1 (33%)

TABLE 7

FOOD SAFETY EVENTS INVOLVING UNDECLARED ALLERGENS, 2015-2019

UNDECLARED ALLERGEN	2019 N = 8 EVENTS n (%)	2018 N = 5 EVENTS n (%)	2017 N = 3 EVENTS n (%)	2016 N = 0 EVENTS n (%)	2015 N = 3 EVENTS n (%)
Almond	1 (12%)	-	-	-	2* (67%)
Cashew	1 (12%)	-	-	-	-
Egg	1 (12%)	-	2 (67%)	-	-
Gluten	1 (12%)	-	-	-	-
Milk	1 (12%)	1 (20%)	-	-	1 (33%)
Peanut	1 (12%)	2 (40%)	1 (33%)	-	2* (67%)
Pistachio	1 (12%)	-	-	-	-
Sesame	-	-	-	-	-
Shellfish	-	2 (40%)	-	-	-
Walnut	1 (12%)	-	-	-	-

\* 2 events involved both undeclared almond and peanut in 2015



**Jackie Leung**  
Centre for Food Safety, Food and Environmental  
Hygiene Department, Hong Kong Government,  
INFOSAN Focal Point, Hong Kong SAR  
(China)

*“ INFOSAN has provided a very effective communication platform for handling food safety incidents and is especially reliable because the information is coming through official channels. It enables all members to exchange information on food safety through the platform which is so important because Hong Kong imports food from all over the world. ”*

**TABLE 8**  
SOURCE OF NOTIFICATION OF INFOSAN EVENTS, 2015-2019

SOURCE OF NOTIFICATION	2019 N = 84 EVENTS n (%)	2018 N = 78 EVENTS n (%)	2017 N = 44 EVENTS n (%)	2016 N = 40 EVENTS n (%)	2015 N = 37 EVENTS n (%)
European Centre for Disease Prevention and Control (ECDC)	2 (2%)	6 (7%)	2 (5%)	-	2 (5%)
European Commission's RASFF Contact Point (RASFF ECCP)	26 (31%)	28 (34%)	6 (14%)	-	3 (8%)
FAO Food Safety and Quality Unit (AGFF)	1 (1%)	1 (1%)	-	-	-
INFOSAN Emergency Contact Point or Focal Point	45 (53%)	19 (24%)	12 (27%)	10 (25%)	14 (38%)
WHO headquarters event-based surveillance*	6 (7%)	19 (24%)	11 (25%)	15 (37%)	8 (22%)
WHO Regional Office for Africa (AFRO)	-	-	1 (2%)	-	-
WHO Regional Office for the Americas (AMRO)	1 (1%)	2 (2%)	7 (16%)	4 (10%)	5 (14%)
WHO Regional Office for Europe (EURO)	3 (4%)	1 (2%)	5 (11%)	10 (25%)	5 (14%)
WHO Regional Office for the Western Pacific (WPRO)	-	2 (2%)	-	1 (3%)	-
WHO Regional Office for the Eastern-Mediterranean	1 (1%)	1 (1%)	-	-	-

\* Includes surveillance activities conducted in different departments of the Health Security and Environment Cluster

## EVENTS IN FOCUS

### Outbreak of listeriosis in Europe linked to the consumption of frozen vegetable products



In mid-2018, a protracted outbreak of Listeriosis<sup>3</sup> was reported across five Member States of the European Union and was linked to frozen vegetable products distributed to over 120 countries. The INFOSAN Secretariat worked in collaboration with the European Rapid Alert System for Food and Feed (RASFF) as well as with INFOSAN members in the exporting countries to identify and share export details with recipient countries. During this event, information sharing through INFOSAN helped to facilitate the recall of affected products, the provision of public health advice to consumers, and the implementation of risk management measures to reduce exposure to the implicated products around the world. This outbreak serves as a reminder to consumers that frozen raw vegetables should be cooked or heat-treated properly before consumption.

<sup>3</sup> [https://www.who.int/foodsafety/areas\\_work/infosan/Listeriosis-ContaminatedVegetables/en/](https://www.who.int/foodsafety/areas_work/infosan/Listeriosis-ContaminatedVegetables/en/)

## Outbreak of salmonellosis in Europe linked to the consumption of infant formula products



In early 2019, a multi-country outbreak of *Salmonella* Poona infections in France, Belgium and Luxembourg linked to the consumption of infant formula products based on rice proteins manufactured at a single factory in Spain, was reported to the INFOSAN Secretariat. Products linked to this outbreak were distributed globally. The INFOSAN Secretariat worked in collaboration with the INFOSAN Emergency Contact Points in Spain and France to identify and share distribution details with INFOSAN members in recipient countries. During this event, information-sharing through INFOSAN helped to facilitate the recall of affected infant formula products, the identification of onward international distribution. No cases of illness were reported to the INFOSAN Secretariat in recipient countries outside of Europe. Further information on the outbreak can be found in the Joint ECDC-EFSA Rapid Outbreak Assessment titled '*Multi-country outbreak of Salmonella Poona infections linked to consumption of infant formula*'.<sup>4</sup>

## Outbreak of *Salmonella* infections in Canada linked to profiteroles and eclairs from Thailand



In early 2019, the INFOSAN Secretariat was notified by INFOSAN colleagues in Canada of an outbreak of *Salmonella* Enteritidis infections in Canada linked to the consumption of frozen profiteroles and eclairs, imported from Thailand. In total, 85 cases of Salmonellosis were reported, including three deaths. Through engagement with the INFOSAN Emergency Contact Point in Thailand, the INFOSAN Secretariat was informed that the implicated frozen profiteroles and eclairs were also distributed internationally to Australia; the Emergency Contact Point in Australia was informed of this distribution and a recall in Australia was conducted. INFOSAN colleagues in Australia, Canada and Thailand continued to facilitate the exchange of distribution details and Whole Genome Sequence information to assist with the identification of any illnesses linked to the consumption of the implicated products.

<sup>4</sup> Further reading: <https://www.ecdc.europa.eu/en/publications-data/rapid-outbreak-assessment-multi-country-outbreak-salmonella-poona-infections>

### **Outbreak of methanol poisoning in Costa Rica linked to adulterated, counterfeit alcoholic beverages**



In mid-2019, the INFOSAN Secretariat was made aware of an outbreak of methanol poisoning in Costa Rica linked to the consumption of adulterated, counterfeit alcoholic beverages. During the investigation, the INFOSAN Emergency Contact Point in Costa Rica shared on the INFOSAN Community Website, details of the implicated products as they became available. Due to the criminal nature of the event and the possibility of implicated products being illegally distributed, other INFOSAN members in the region exchanged information about the risk management measures implemented in their respective countries and their past experiences in responding to similar incidents. No other illnesses associated with the implicated products were reported from other countries.

### **Outbreak of *E. coli* O157:H7 infections in the USA linked to the consumption of domestically grown romaine lettuce, distributed internationally**



Towards the end of 2019, an outbreak of *E. coli* O157:H7 infections in the United States of America (USA) linked to the consumption of romaine lettuce grown in Salinas, California, was reported to the INFOSAN Secretariat. Following reports of the suspension in Hong Kong SAR (China) of the import and sale of romaine lettuce from the USA in any form, the INFOSAN Secretariat worked in collaboration with the respective INFOSAN Emergency Contact Points to seek information pertaining to illnesses in Hong Kong SAR (China) linked to the consumption of romaine products. During this event, colleagues in the USA shared whole genome sequence information to assist with the identification of international cases. Subsequently, it was confirmed that no *E. coli* O157:H7 infections were reported in Hong Kong SAR (China). No other reports of illnesses outside of the USA were reported to the INFOSAN Secretariat.

## BOX 1

## COUNTRY SHOWCASE

**Brazilian Emergency Contact Point spends three-months with the INFOSAN Secretariat in Geneva, Switzerland**

During the summer of 2019, Ms Laila Mouawad spent three months working alongside members of the INFOSAN Secretariat in Geneva, Switzerland. With a specific focus on Portuguese-speaking countries, Ms Mouawad was able to assist with membership issues, incident response, webinars, and simulation exercises, among other tasks. For the INFOSAN Secretariat, having the chance to learn from an Emergency Contact Point during such a work placement is an invaluable experience that has mutual benefits for both members and the Secretariat staff alike. Bringing the perspective from the national point of view enables INFOSAN procedures and tools to be refined and better targeted to suit the needs of members. As highlighted in the new INFOSAN Secretariat Strategic Plan 2020-2025, such short-term work assignments will continue to be promoted in the future.



Laila Mouawad  
Brazil National Health Surveillance Agency  
INFOSAN Emergency Contact Point,  
Brazil

*“ The time spent with the INFOSAN Secretariat was of great value to understand the functioning and management of the Network, and it gave me important insights to improve Brazil’s participation. ”*

Photo credit: © Ms Mouawad

*“ INFOSAN has been a critical part of our work at the Canadian Food Inspection Agency (CFIA) and given that we are responsible for developing surveillance plans, we’re always looking for new ideas and contacts with other members to ensure that we do the best work possible. The CFIA uses INFOSAN and its members to create those relationships with other competent authorities and be able to develop better sampling plans, use better methodologies and be faster in our responses. ”*



Annie Locas  
Canadian Food Inspection Agency  
INFOSAN Focal Point  
Canada

Photo credit: © Ms Locas



## CAPACITY BUILDING ACTIVITIES

### NATIONAL CAPACITY BUILDING WORKSHOPS

#### **National workshop to strengthen collaboration and awareness of INFOSAN in Tunisia**

In March 2019, the INFOSAN Secretariat facilitated a two-day national workshop in Tunis, Tunisia, organized in collaboration with l'Agence Nationale de Contrôle Sanitaire et Environnemental des Produits of Tunisia. The workshop gathered stakeholders in Tunisia involved in various areas related to food safety to sensitize them to the activities of INFOSAN and to strengthen and reinforce INFOSAN in Tunisia. The objectives of the workshop were to:

1. Identify opportunities and means to strengthen the national INFOSAN network, in particular, national intersectoral collaboration, partnerships and information-sharing on food safety issues, including in emergencies;
2. Provide a clear understanding of what INFOSAN is and how it works during an international food safety emergency (considering the IHR 2005);
3. Discuss and clarify the roles of the INFOSAN Emergency Contact Point and INFOSAN Focal Points of the various ministries/authorities concerned;
4. Provide hands-on training on the INFOSAN Community Website;
5. Clarify when and how to issue food safety alerts as part of a national food alert system; and
6. Develop a common understanding for a national integrated approach to the management of food safety events.

Upon conclusion of this workshop, participants were better informed about INFOSAN and gained a deeper understanding of their roles and responsibilities as Network members. Follow-up actions included the designation of additional INFOSAN Focal Points in Tunisia and sustained efforts to strengthen national communication on matters of food safety.

#### **National INFOSAN Workshop to strengthen collaboration and communication for a national food safety alert system in Ghana**



In October 2019, all national authorities with a stake in food safety met together in Accra, Ghana for a three-day workshop focused on strengthening the national food safety alert system. The specific workshop objectives were to:

1. Identify opportunities to strengthen the National Food Safety Alert System, specifically national cross-sectoral collaboration, partnership, and information sharing on matters of food safety, including emergencies;
2. Clarify when and how to issue food safety alerts as part of a National Food Alert System; and

3. Develop a common understanding for a national integrated approach to food safety event management. Using presentations, discussions and exercises, participants were able to develop concrete actions for the short-, medium- and long-term that will support the development of the national food safety alert system.

Most notably, it was agreed that the Ghana Food and Drugs Authority would lead the drafting of a national food safety emergency response plan, taking into consideration the available guidance from FAO and WHO and utilizing the template on IHR/INFOSAN communication that was provided to all participants. In addition, INFOSAN Focal Points would be officially designated from the relevant agencies and registered on the INFOSAN Community Website.

## IMPROVING PREPAREDNESS THROUGH ONLINE SIMULATION EXERCISES

In September and November 2018, online emergency communication exercises were organized for INFOSAN Emergency Contact Points and National IHR Focal Points from 12 countries in the Americas and 15 countries in South-East Asia and Western Pacific regions respectively. The objectives of the exercises were to: 1) familiarize participants with the type of information typically requested and exchanged through INFOSAN during an international food safety emergency; 2) verify the communication channel between INFOSAN Emergency Contact Points and National IHR Focal Points; and 3) ensure INFOSAN Emergency Contact Points can access and utilize the INFOSAN Community Website. Feedback from INFOSAN members following the exercise indicated that participation highlighted specific areas to be strengthened to bolster preparedness for food safety emergency response in the future.

## RESOURCE SPOTLIGHT SERIES



One of the aims of INFOSAN is to share information on important food safety issues of global interest. To provide some structure to this activity, the INFOSAN Secretariat launched the “Resource Spotlight” series in 2019 to highlight resource material from FAO and/or WHO related to food safety. Each month, publications are highlighted for members by indicating the purpose of the resource, the target audience, as well as the languages in which the material is available.



## NETWORK-BUILDING ACTIVITIES

### CONNECTING WITH INFOSAN MEMBERS VIA ONLINE SEMINARS (i.e. WEBINARS)



The INFOSAN Secretariat has continued to engage with members online during live webinars, during which members' roles and responsibilities were discussed and a demonstration of the INFOSAN Community Website was made. These online presentations were delivered in English, French and Spanish, and provided an opportunity for new members to familiarize themselves with INFOSAN and ask the INFOSAN Secretariat questions directly.

The INFOSAN Secretariat also launched an eight-part Technical Webinar Series in French that ran from 7 February 2018 - 28 March 2018, in collaboration with INFOSAN colleagues in Canada. The series followed two previous webinar series that had been delivered in English in 2016 and 2017 by INFOSAN members from Canada and the USA. The French series covered the following topics from a Canadian perspective: foodborne outbreak investigation; food safety investigation; health risk assessment; Canada's food recall system; Canada's enteric outbreak toolkit; foodborne disease surveillance and other related topics. Overall, INFOSAN members from 23 countries registered to attend at least one of the webinars during the series, with a total of 69 participants overall. The series provided an opportunity for INFOSAN members to exchange information and share lessons learned about various technical topics related to food safety and foodborne diseases that are of interest to INFOSAN members around the globe.

### STRENGTHENING THE INFOSAN COMMUNITY AND ITS ACTIVITIES THROUGH REGIONAL INITIATIVES

In December 2018, the INFOSAN Secretariat, together with WHO colleagues from the South-East Asia and Western Pacific offices, facilitated a meeting of INFOSAN members in Asia in Seoul, Republic of Korea. Fifty INFOSAN members from 18 countries attended the meeting. The outcomes of the two online emergency communication exercises held in November 2018 were reviewed, as was the involvement of members in the Asian region in the [outbreak of \*Salmonella\* Agona infections linked to internationally distributed infant formula](#). INFOSAN members in Asia agreed to share INFOSAN Action Plans for 2019 with the INFOSAN community. These plans will contribute to strengthening INFOSAN and other activities related to food safety emergency response. Many thanks to the Republic of Korea for their efforts to coordinate this meeting. Financial support from the Republic of Korea and the WHO Global Outbreak Alert and Response Network Secretariat for the organization of this meeting is appreciated.

### **Fifth and sixth Regional Meetings of INFOSAN members from the Americas: November 2018, Guanajuato Mexico, and December 2019, Abu Dhabi, UAE**



In early November 2018, the INFOSAN Secretariat, together with colleagues from the Pan-American Health Organization (PAHO) organized the fifth Regional Meeting of INFOSAN members in the Americas, held in Guanajuato, Mexico. More than 50 INFOSAN members from 30 countries attended the meeting where the updated Regional Strategy to Strengthen INFOSAN in the Americas was reviewed. In addition, INFOSAN members in the Americas developed INFOSAN Action Plans for 2019 and shared these on the INFOSAN Community Website. The Americas is the only region where regional INFOSAN meetings have been organized annually and where a regional strategy for strengthening INFOSAN has been developed and actioned. In addition, the Americas is now the first and only region to achieve 100% membership coverage (i.e. active INFOSAN Emergency Contact Points in all Member States). Participation in regional meetings on an annual basis has certainly contributed to INFOSAN members in the Americas being the most responsive during food safety emergencies when engaged by the INFOSAN Secretariat, compared to members from other regions.

Following the Second Global Meeting of INFOSAN that took place from the 9-11 December 2019, INFOSAN members from 26 countries of the WHO Region for the Americas met together for the sixth time on 12 December 2019 in Abu Dhabi, United Arab Emirates. During the meeting, participants reflected on the outcomes of the Second Global Meeting of INFOSAN and the impact of these for the region. This discussion allowed INFOSAN members from the region to express their thoughts and to formulate requests to the INFOSAN Secretariat to undertake actions that support trust-building and the development of their capacity to assess food safety risks and communicate during food safety emergencies. Participants also discussed some figures of health emergencies in the region and the importance of using the new template for INFOSAN/IHR communication (see box 2) and the related collaboration with National IHR Focal Points (IHR NFP). Participants also learned about recent INFOSAN activities at the global and regional levels, including some latest food safety emergencies in which Member States from the Americas were involved.

A review of the regional progress in strengthening INFOSAN in the Americas, in accordance with the revised draft of the Regional Strategy to Strengthen INFOSAN in the Americas (2018) was also presented. A panel discussion was held with the collaboration of the INFOSAN Emergency

Contact Points from Costa Rica, Nicaragua and the INFOSAN Secretariat to discuss the implications at the national and regional levels of the outbreak of Methanol Poisoning in Costa Rica that happened in 2019.

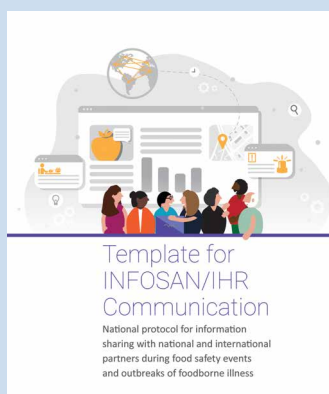
The progress of the utilization of Whole Genome Sequencing (WGS) in the Americas was presented, as well as some examples and plans for WGS in the food safety emergency context. Country-specific action plans were also reviewed and additional priority activities for strengthening INFOSAN and developing national food safety capacity in the Americas were identified and posted on a thread on the INFOSAN Community Website. Such activities will be reviewed by mid-2020 to assess the progress and support in the implementation of identified actions if deemed appropriate.

Annual regional meetings have been instrumental in forging a strong community of INFOSAN members in the Americas. As a result, the Region of the Americas is the first out of the six WHO Regions to have full coverage of active INFOSAN Emergency Contact Points in all Member States. The expansion of INFOSAN-related activities in the region has continued, and there has been a marked increase in responsiveness to requests for information from the INFOSAN Secretariat during emergencies, as compared to other regions where no such regional meetings are held.

## BOX 2

### PUBLICATION SHOWCASE

**Template for INFOSAN/IHR Communication: A National protocol for information sharing with national and international partners during food safety events and outbreaks of foodborne illness**



The template for INFOSAN/IHR communication is an annex to the new INFOSAN Members Guide and can serve as a starting point for the development of a national protocol for information sharing among various stakeholders involved in food safety emergency response in every country. This includes INFOSAN members, IHR NFPs, and other stakeholders as appropriate. The final document, when adapted to each national context, should provide clear guidance about the procedures for communication between domestic authorities, as well as the WHO including the INFOSAN Secretariat.

### **Fourth regional Meeting of INFOSAN members from Asia, December 2019, Abu Dhabi, UAE**



INFOSAN members from 15 countries of the WHO Region for Asia met together on 12 December 2019 in Abu Dhabi, United Arab Emirates, following the Second Global Meeting of INFOSAN that took place from the 9-11 December 2019.

During the meeting, participants reflected the outcomes of the Second Global Meeting of INFOSAN and the impact of these for the region. This discussion allowed INFOSAN members from the region to express their thoughts and to formulate requests to the INFOSAN Secretariat to undertake actions that support trust-building and the development of their capacity to assess food safety risks and communicate during food safety emergencies.

Participants also discussed the implementation of WHO regional food safety strategies and frameworks and learned about several FAO activities that are ongoing in Asia. The experience of successful regional networking in the Americas was shared as an example for members in Asia and to serve as inspiration and a model to work towards to improve engagement in INFOSAN activities. Participants also learned about recent INFOSAN activities at the global and regional levels, including some recent food safety emergencies in which Member States from Asia were involved. One of these incidents was presented by the INFOSAN Emergency Contact Point from the Republic of Korea and related to an outbreak of hepatitis A infections linked to clams. Members started to work on national action plans to highlight key activities to be undertaken in 2020 to strengthen INFOSAN. These plans were to be posted on the INFOSAN Community Website, reported on by mid-2020 and reviewed at the next regional meeting for INFOSAN Members from Asia.

## STRENGTHENING LINKS TO OTHER NETWORKS AND INITIATIVES

### Community of Portuguese Language Countries (CPLP)



The Community of Portuguese Language Countries (CPLP) is a group of countries, representing 267 million people, united not only by the language but also by the culture and a shared history. These commonalities have resulted in some similar habits with respect to food consumption and food legislation. With Portuguese-speaking countries spread across five continents, CPLP has proposed to use the INFOSAN Community Website for the creation of a hub in the Portuguese language that will provide the CPLP's food safety authorities with tools and resources to support the management of food safety incidents. With support from the INFOSAN Emergency Contact Point in Brazil, the INFOSAN Secretariat made special efforts in 2019 to work with CPLP countries and facilitate their active participation in Network activities. This included efforts to identify new members and to engage existing members in training webinars and a simulation exercise.

### The European Food Safety Authority's (EFSA) Emerging Risks Exchange Network (EREN)

The European Food Safety Authority (EFSA) networks with Member States, the European Union (EU) and international agencies including WHO and FAO on exchanging data, methodologies and lessons learnt on emerging risks through its Emerging Risks Exchange Network (EREN). The main goals are to facilitate harmonization of assessment practices and methodologies, enhance exchange of information and data between EFSA and Member States, and achieve synergies in risk assessment activities. As an observing member of EREN, the INFOSAN Secretariat participated in two EREN meetings in 2018 and two in 2019. It has been agreed between the INFOSAN Secretariat and the EREN Secretariat that in the context of non-emergency emerging issues, EREN can serve as an information provider to members of INFOSAN on medium- or longer-term emerging risks. Likewise, issues raised by INFOSAN members can be channeled to EREN for their consideration to provide perspectives from beyond Europe. For example, the INFOSAN Secretariat presented on the topic of norovirus contamination of seaweed and the resulting outbreak in Europe as well as lychee intoxications linked to encephalitis. The presentation of these topics resulted in the further exchange of information between INFOSAN members beyond Europe and demonstrated the importance of this kind of cross-network collaboration.

### Arab Food Safety Initiative for Trade Facilitation (SAFE)

In July 2018, a workshop about the development of an Arab Rapid Alert System for Food and Feed (ARASFF) was held in Tunis, Tunisia. The workshop was convened under the auspices of the Arab Food Safety Initiative for Trade Facilitation (SAFE), in collaboration with the INFOSAN Secretariat. Twenty-five participants from 13 countries in the Eastern Mediterranean and northern Africa attended to discuss the future development of ARASFF and the important interface this



will have with INFOSAN. Regional networks can serve to strengthen INFOSAN globally in several ways, including as important sources of food safety intelligence. However, we need to ensure complementarity of such systems and avoid the creation of parallel communication tracks, especially during food safety emergencies. Ensuring members of regional networks, such as ARASFF, are also designated as INFOSAN members is one way that this has been achieved.

## STRATEGIC INITIATIVES

### DEVELOPMENT OF THE INFOSAN SECRETARIAT STRATEGIC PLAN 2020-2025



INFOSAN operates in a constantly changing environment which requires the capacity to react to food safety challenges, new technologies, and evolving environmental and political realities of member countries. As such, INFOSAN operations and management are designed with the flexibility required to adapt to changing circumstances as well as new challenges.

The increasing use of INFOSAN by members demonstrates the confidence in the services provided within the mandate of FAO and WHO. However, beyond outlining the day-to-day operations, there was a need to provide a strategic vision that describes the future role of the Network. This was achieved by publishing the INFOSAN Secretariat Strategic Plan 2020-2025 in December 2019.

This strategy starts with a description of the objectives and methodology of the strategic thinking process, continues by providing an overview of the history, status and contextual factors influencing INFOSAN operations, and concludes with a description of six strategic objectives by outlining the key challenges as well as actions to be taken by the INFOSAN Secretariat to achieve these objectives.

We hope that this document will serve as a source of inspiration for future discussions that will further inform the strategic thinking process and shape the future direction of INFOSAN. This document should be referred to during the development of specific project proposals that will aim to address specific actions to achieve the identified objectives. INFOSAN members should note that this document has been drafted by the INFOSAN Secretariat in consultation with the INFOSAN Advisory Group and complements other documentation that has been published with the support of the broader INFOSAN membership, including the INFOSAN Members' Guide.

## REVITALIZATION OF THE INFOSAN ADVISORY GROUP

The INFOSAN Advisory Group, first established in 2006, has undergone a revitalization process in 2019 to enlist new members. INFOSAN Advisory Group members bring unique knowledge, skills and experiences to complement the knowledge and skills of the Secretariat to more effectively govern the Network by offering innovative advice and dynamic perspectives. The purpose of the INFOSAN Advisory Group is to support INFOSAN activities by advising on ways to strengthen the Network, including: 1) contributing to strategic planning; 2) guiding quality improvement; 3) advocating for the Network; 4) supporting the Secretariat for technical consultation; and 5) resource mobilization. FAO and WHO through the FAO/WHO INFOSAN Management Group are responsible for selecting members by considering expertise related to INFOSAN activities and strategic planning ability. INFOSAN Advisory Group members act in their own capacity and do not represent their countries or institutions. The term for the INFOSAN Advisory Group members is set to be four years, renewable without limitation upon expression of continued interest by the Advisory Group Member, FAO and WHO.



## Members of the INFOSAN Advisory Group Include:



1. <b>Mr Mark Samadhin</b> Public Health Agency of Canada Guelph, Canada	8. <b>Dr Anne Gravett</b> Food Standards Agency London, United Kingdom
2. <b>Ms Isabelle Laberge</b> Canadian Food Inspection Agency Ottawa, Canada	9. <b>Mr Jan Baele</b> European Commission Brussels, Belgium
3. <b>Dr Peter Gerner-Smidt</b> United States Centers for Disease Control and Prevention Atlanta, USA	10. <b>Dr Caroline Merten</b> European Food Safety Authority Parma, Italy
4. <b>Dr Stic Harris</b> United States Food and Drug Administration College Park, USA	11. <b>Dr Marium Al Yousuf Alsuwaidi</b> Abu Dhabi Agriculture and Food Safety Authority Abu Dhabi, United Arab Emirates
5. <b>Mr Diego Jose Varela</b> Chilean Agency for Food Safety and Quality Santiago, Chile	12. <b>Professor Joergen Schlundt</b> Nanyang Technological University Singapore
6. <b>Dr Zainab Jallow</b> Food Safety and Quality Authority of The Gambia Serre Kunda, The Gambia	13. <b>Ms Jenny Bishop</b> Ministry for Primary Industries Wellington, New Zealand
7. <b>Professor Alan Reilly</b> Institute for Food and Health, University College Dublin Dublin, Ireland	



# The Network Structure

## MEMBERSHIP OVERVIEW

Membership to INFOSAN is voluntary and is restricted to representatives from national and regional government authorities. Each member should be officially designated. To foster multisectoral collaboration, the ideal structure of INFOSAN membership at the national level should be characterized by a single INFOSAN Emergency Contact Point (designated by the government authority responsible for coordinating national food safety emergency response activities), and additional INFOSAN Focal Points from each of the various government sectors involved in food safety.

Since its launch in 2004, 190 Member States have joined INFOSAN. In addition, some Associate Member States and overseas areas/territories of Member States have also designated INFOSAN members.<sup>5</sup> Sustained efforts at the Secretariat are ongoing to encourage existing members to remain active and engaged, and to advocate for all 194 members of WHO and FAO to join INFOSAN.

## GEOGRAPHICAL DISTRIBUTION OF MEMBERSHIP

Active engagement requires INFOSAN members to regularly access the INFOSAN Community Website. This members-only, online platform provides a secure forum for INFOSAN members to connect with one another, exchange ideas, and ask questions to fellow food safety regulators around the world. While the INFOSAN Secretariat maintains a list of INFOSAN members, only those registered on the INFOSAN Community Website are considered “active”. Table 9 displays the number of Member States by region<sup>6</sup>, with an INFOSAN Emergency Contact Point registered on the INFOSAN Community Website as of the end of 2019, compared to previous years.

As of the end of 2019, 172 (89%) of 194 Member States have an INFOSAN Emergency Contact Point registered, representing a 4-point increase during the 2018/2019 biennium. INFOSAN membership was particularly enhanced in the Eastern Mediterranean region during this period; where 5 new Member States registered an Emergency Contact Point on the INFOSAN Community Website.

Unlike the INFOSAN Emergency Contact Point, INFOSAN Focal Points may not be directly involved during an emergency response; however, they still have important responsibilities for ensuring national food safety. Table 10 illustrates, by region, the number of Member States with one or more INFOSAN Focal Point(s) registered on the INFOSAN Community Website as of the end of 2019, compared to previous years.

<sup>5</sup> Associate Member States are invited to designate an Emergency Contact Point and Focal Points; areas/territories are represented by the Emergency Contact Point from their participating Member State but are encouraged to designate Focal Points.

<sup>6</sup> For the purpose of this report, regional divisions of Member States/areas/territories are based on coverage provided by the six WHO regional offices. For more information visit: <http://www.who.int/about/regions/en/index.html>

As of the end of 2019, 138 (71%) of 194 Member States have one or more INFOSAN Focal Point(s) registered, representing an 8-point increase during the 2018/2019 biennium. None of the four associate Member States have designated Focal Points. Eight (36%) of 22 areas/territories of Member States have registered INFOSAN Focal Points. INFOSAN members from both the Eastern Mediterranean region and the African region have made the most progress with respect to the designation of new INFOSAN Focal Points during this two-year period.

These achievements are in line with one of the future directions defined in the 2016/2017 INFOSAN Activity Report: to strengthen INFOSAN membership by focusing on under-represented areas (including in Africa and in the Americas). Targeted efforts will continue through the current biennium (2020/2021) to ensure that all INFOSAN members are active and well versed in their roles and responsibilities.

TABLE 9

MEMBER STATES AND ASSOCIATE MEMBERS WITH AN **INFOSAN EMERGENCY CONTACT** POINT REGISTERED ON THE INFOSAN COMMUNITY WEBSITE BY REGION FROM 2015 TO 2019

REGION		2019, n (%) <sup>*</sup>	2018, n (%) <sup>*</sup>	2017, n (%) <sup>*</sup>	2016, n (%) <sup>*</sup>	2015, n (%) <sup>*</sup>
African Region	47 Member States	38 (81%)	37 (78%)	36 (77%)	32 (68%)	26 (55%)
Region of the Americas	35 Member States	35 (100%)	33 (94%)	32 (91%)	30 (85%)	25 (71%)
	4 Associate Members	2 (50%)	2 (50%)	2 (50%)	2 (50%)	2 (50%)
Eastern Mediterranean Region	21 Member States	18 (86%)	16 (76%)	13 (62%)	13 (62%)	13 (62%)
European Region	53 Member States	49 (92%)	47 (89%)	47 (89%)	45 (85%)	45 (85%)
South-East Asia Region	11 Member States	10 (91%)	10 (91%)	10 (91%)	10 (91%)	10 (91%)
Western Pacific Region	27 Member States	22 (81%)	22 (81%)	22 (81%)	22 (81%)	22 (81%)
Global	194 Member States	172 (89%)	165 (85%)	160 (82%)	152 (78%)	141 (73%)
	4 Associate Members	2 (50%)	2 (50%)	2 (50%)	2 (50%)	2 (50%)

\* Percentage is calculated by dividing the number of Member States (or Associate Members) with an INFOSAN Emergency Contact Point registered on the INFOSAN Community Website in each region by the total number of Members States (or Associate Members) in that region. For example, in the African Region in 2019, 38/47 = 81%.

TABLE 10

MEMBER STATES, ASSOCIATE MEMBERS, AND AREAS/TERRITORIES WITH ONE OR MORE **INFOSAN FOCAL POINT(S)** REGISTERED ON THE INFOSAN COMMUNITY WEBSITE BY REGION FROM 2015 TO 2017

REGION		2019, n (%)	2018, n (%)	2017, n (%)	2016, n (%)	2015, n (%)
African Region	47 Member States	34 (72%)	32 (68%)	30 (64%)	28 (60%)	23 (49%)
Region of the Americas	35 Member States	28 (80%)	29 (82%)	29 (82%)	27 (77%)	23 (66%)
	4 Associate Members	-	-	-	-	-
	12 areas/territories	3 (25%)	3 (25%)	3 (25%)	3 (25%)	3 (25%)
Eastern Mediterranean Region	21 Member States	18 (86%)	16 (76%)	10 (48%)	10 (48%)	10 (48%)
European Region	53 Member States	32 (60%)	29 (55%)	31 (58%)	30 (57%)	30 (57%)
South-East Asia Region	11 Member States	6 (55%)	6 (55%)	6 (55%)	5 (45%)	5 (45%)
Western Pacific Region	27 Member States	20 (74%)	20 (74%)	17 (63%)	17 (63%)	18 (67%)
	10 areas/territories	5 (50%)	5 (50%)	5 (50%)	4 (40%)	4 (40%)
Global	194 Member States	138 (71%)	132 (68%)	123 (63%)	117 (60%)	109 (56%)
	4 Associate Members	-	-	-	-	-
	22 areas/territories	8 (36%)	8 (36%)	8 (36%)	7 (32%)	7 (32%)

\* Percentage is calculated by dividing the number of Member States (or Associate Members or areas/territories) with at least one INFOSAN Focal Point registered on the INFOSAN Community Website in each region by the total number of Members States (or Associate Members or areas/territories) in that region. For example, in the African Region in 2019, 34/47 = 72%.



Cristina Baptista Rodrigues  
General Directorate of Food and  
Veterinary Affairs  
INFOSAN Emergency Contact Point,  
Portugal

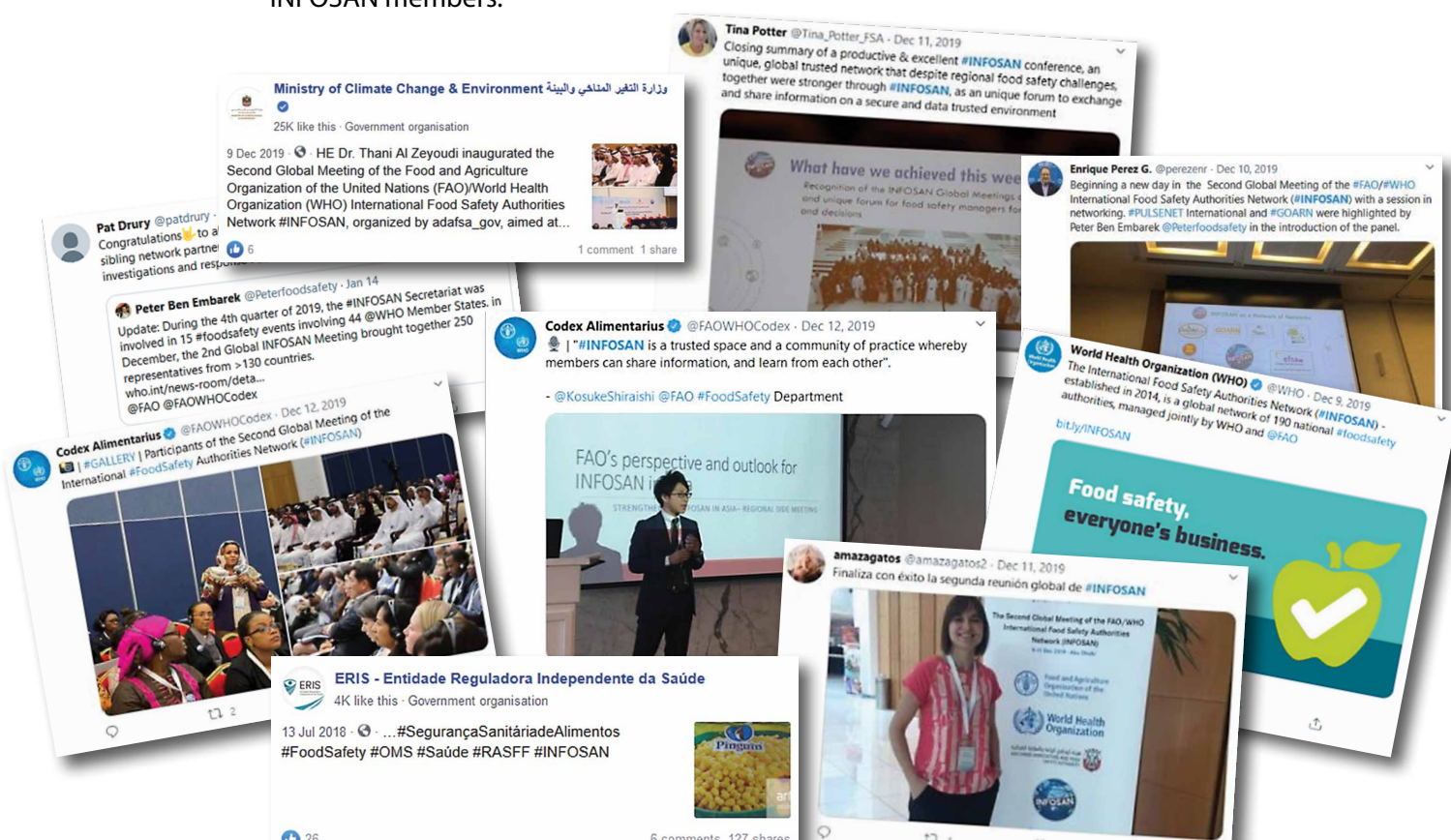
“ INFOSAN is an important global network that can help make food safer for everyone in the world. INFOSAN has become a significant part of our work that aims to develop connections between the food safety agencies in Portuguese-speaking countries. ”

## The Rising Profile of INFOSAN

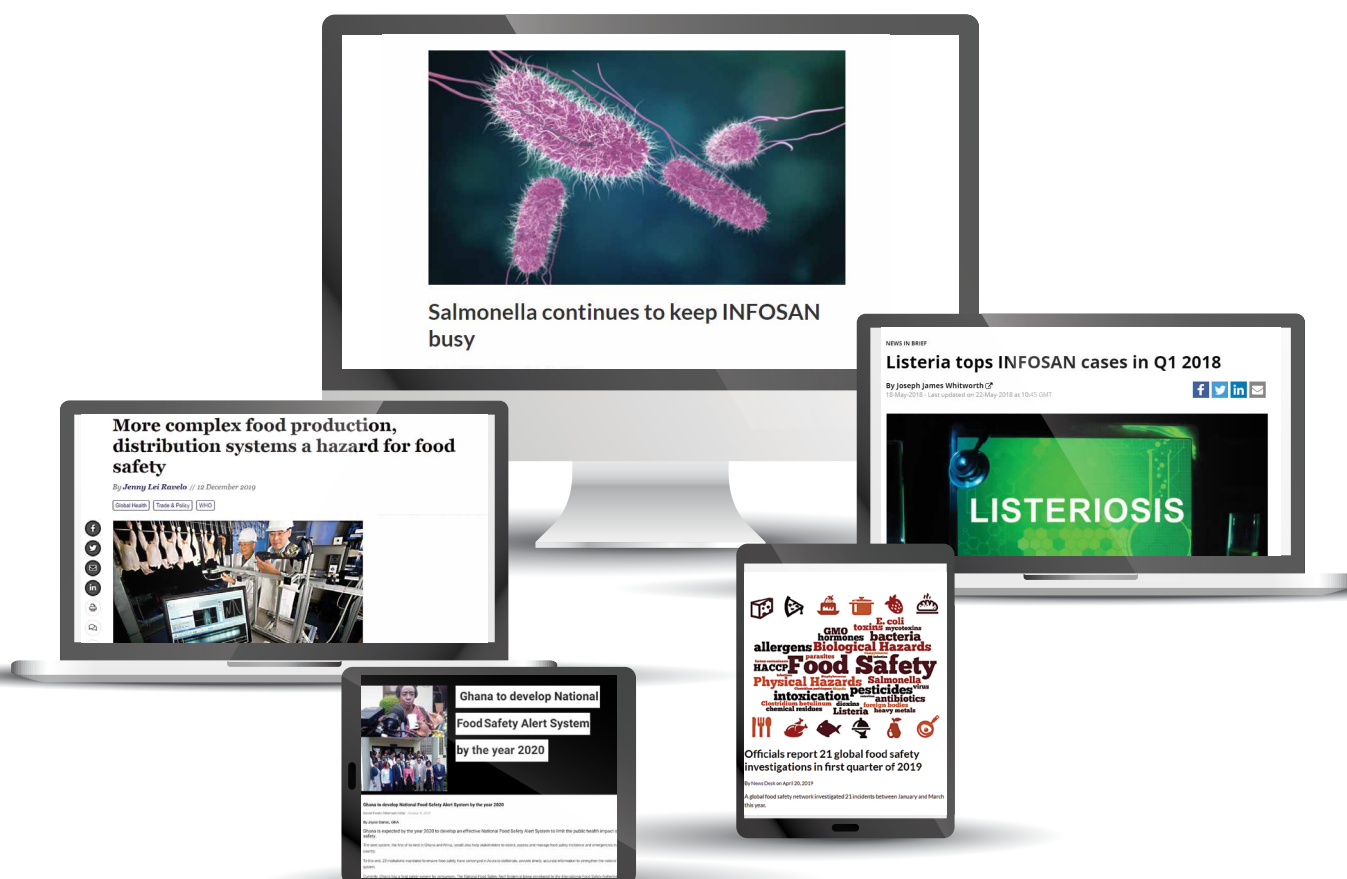
## INFOSAN IN THE TWITTERSPHERE AND OTHER MEDIA

In the 2018/2019 biennium, #INFOSAN was tagged in hundreds of tweets and social media posts from accounts in more than 50 countries around the world. These represent individuals, news outlets, consumer organizations, academic institutions, industry representatives and government authorities. Some specific topics that were the subject of multiple tweets include:

- FAO/WHO/AU International Food Safety Conference, Addis Ababa, Ethiopia, February 2019.
- WTO International Forum on Food Safety and Trade in Geneva, Switzerland, April 2019.
- Second Global INFOSAN meeting, Abu Dhabi, United Arab Emirates, December 2019.
- Outbreak of listeriosis linked to internationally distributed frozen vegetables from Hungary.
- Outbreak of salmonellosis in France linked to domestically produced infant formula distributed internationally.
- INFOSAN quarterly reports and the involvement of the Network in various food safety events.
- Summary report by a news outlet on the past high-profile work of INFOSAN which involved fipronil, rumours of fake rice and events caused by *Salmonella* contamination.
- Outbreak of listeriosis in July/August 2019 in Spain involving shredded meat with over 200 affected consumers.
- Report on global perspectives on food fraud including the results from the survey of INFOSAN members.



As observed in past years, several food safety events captured headlines around the globe in 2018 and 2019, with news reports citing INFOSAN as a source of information that prompted national authorities to take action or recognizing the Network for its information-dissemination activities.





## INFOSAN AT INTERNATIONAL CONFERENCES

The INFOSAN Secretariat discussed the activities of the Network at several international conferences in 2018/2019. A selection of these is listed below:

- International Association of Food Protection (IAFP) European Symposium on Food Safety, 25–27 April 2018, Stockholm, Sweden
- IAFP Annual Meeting, 8-11 July 2018, Salt Lake City, Utah, USA
- Dubai International Food Safety Conference, 28-31 October 2018, Dubai, UAE
- IAFP European Symposium on Food Safety, 24-26 April 2019, Nantes, France
- IAFP Annual Meeting, 21-24 July, USA 2019, Louisville, Kentucky, USA
- Global Health Security (GHS2019) Conference 17-20 June 2019, Sydney, Australia
- International Food Safety and Quality Conference, 30-31 October 2019, Beijing, China
- Canadian Conference on Global Health, 17-19 October 2019, Ottawa, Ontario, Canada

In addition, the INFOSAN Secretariat hosted a special side event and exhibits at the Codex Alimentarius Commission Meeting in 2018, the First FAO/WHO/AU International Food Safety Conference and the WTO International Forum on Food Safety and Trade as described below.

### Codex Alimentarius Commission Meeting, July 2018



In July 2018, the INFOSAN Secretariat attended the 41st Codex Alimentarius Commission meeting in Rome to host a side event about [INFOSAN](#), [Codex](#) and recent major food safety events. The objective of the side event was to provide participants with an overview of INFOSAN by discussing two recent and significant global food safety emergencies during which INFOSAN was instrumental in coordinating the

rapid exchange of information between members around the world. Events discussed included the large and protracted [outbreak of Listeriosis in South Africa](#) linked to ready-to-eat meat, and the [outbreak of \*Salmonella\* agona infections in France](#) linked to globally distributed food products for infants. Both events highlight the application of several key Codex standards and guidelines and illustrate the importance of their adoption and adaptation to prevent foodborne illness.

### FAO/WHO/AU International Food Safety Conference, February 2019



On 12-13 February 2019, over 700 delegates gathered in Addis Ababa, Ethiopia for the First International Food Safety Conference, hosted jointly by FAO, WHO and the African Union (AU). In his statement before the member states, WHO Director-General Tedros Adhanom Ghebreyesus emphasized the importance of INFOSAN and reminded delegates that *"INFOSAN supports countries to manage food safety risks by sharing information, experiences and solutions"*. The INFOSAN Secretariat participated in the conference and set up an interactive booth that allowed members of the Secretariat to interact and meet several INFOSAN members, explain to delegates and prospective members how INFOSAN operates, and exchange ideas on how to strengthen INFOSAN globally.

### WTO International Forum on Food Safety and Trade, April 2019



On 23-24 April 2019, over 600 delegates gathered in Geneva, Switzerland to attend the World Trade Organization International Forum on Food Safety and Trade and continue discussions from the [First FAO/WHO/AU International Food Safety Conference](#) held in Addis Ababa, earlier in the year. This Forum highlighted the implications of digital innovation for food safety and trade,

the importance of the coordinated advancement of the 'food safety' and the 'trade facilitation' agendas, and the fundamental role of Codex food standards in facilitating the harmonization of food safety regulatory frameworks as food systems evolve. INFOSAN was exhibited during the conference and enabled participants to meet with the INFOSAN Secretariat and exchange ideas on how to strengthen INFOSAN globally.

## ONGOING STUDY OF INFOSAN

In January 2019, a study was launched to explore the experiences of INFOSAN members and better understand the role of the Network in mitigating the burden of foodborne illness around the world. The study is examining access to and usage of the INFOSAN Community Website, exploring barriers and facilitators to active participation in INFOSAN, determining perceptions about the utility of INFOSAN to mitigate foodborne illness, and scrutinizing if and how participation in this network creates value for members.

A manuscript providing the background to this study has been published online, titled “The FAO/WHO International Food Safety Authorities Network in Review, 2004–2018: Learning from the Past and Looking to the Future”.<sup>7</sup> In May 2019, the protocol for the ongoing study of INFOSAN was published online, titled “*A mixed-method exploration into the experience of members of the FAO/WHO International Food Safety Authorities Network (INFOSAN): study protocol*”.<sup>8</sup> The study is being conducted in three phases. In phase 1 of the study, information from the INFOSAN Community Website was downloaded and analysed to better understand how this online portal is being used by members.

The results from phase 1 provide objective, foundational information about the engagement of all members.<sup>9</sup> Phase 2 of the study involved the completion of an online questionnaire by INFOSAN members. The information from phase 2 will help characterize INFOSAN as a community of practice and provide a broad understanding of members’ experiences and their perceptions of the value of INFOSAN. The third and final phase of the study will involve a series of interviews with a relatively small number of members (between 6 and 12) to further explore the results obtained from the first two phases.

Overall, results from this study will be used by the INFOSAN Secretariat to increase active participation and improve international information exchange to mitigate the impact of food safety emergencies and prevent foodborne diseases globally. For example, results from phase 1 have already been used to inform the redesign of the new INFOSAN Community Website, launching in 2020.

<sup>7</sup> Further reading: <https://pubmed.ncbi.nlm.nih.gov/30932688/>

<sup>8</sup> Further reading: <https://pubmed.ncbi.nlm.nih.gov/31122986/>

<sup>9</sup> Further reading: <https://pubmed.ncbi.nlm.nih.gov/32556306/>



## THE FIRST WORLD FOOD SAFETY DAY, JUNE 2019



On 7 June 2019, the first **World Food Safety Day** was marked with the theme, 'Food Safety is Everyone's Business'. The INFOSAN Secretariat circulated a message encouraging members to commemorate this date, and shared available materials prepared by FAO/WHO, along with a list of activities in which to participate. INFOSAN members from around the globe shared videos, photos and details of the activities and celebrations taking place in their countries on the INFOSAN Community Website.

World Food Safety Day was adopted by the United Nations General Assembly in December 2018 with the aim to protect public health by strengthening efforts to ensure that the food we eat is safe. The process was initiated in 2016 by Costa Rica through the Codex Alimentarius Commission, which is managed by FAO and WHO.

*“ INFOSAN has grown significantly over the past 15 years and now members, especially in Africa, rely on it for trusted information. After hosting a national INFOSAN workshop in Ghana, opportunities to strengthen the National Food Safety Alert System and improve collaboration, partnership and information sharing on matters of food safety, including emergencies, were identified. ”*



Jocelyn Adeline-Egyakwa Amusah  
Food and Drugs Authority  
INFOSAN Emergency Contact Point,  
Ghana

## The Second Global Meeting of INFOSAN



The Second Global Meeting of INFOSAN was held from 9-11 December 2019 in Abu Dhabi, UAE and attended by more than 285 participants from 135 countries. His Excellency Dr Thani Ahmed Al Zeyoudi, Minister of Climate Change and Environment, inaugurated the meeting which was organized by FAO, WHO and the Abu Dhabi Agriculture and Food Safety Authority (ADAFSA). The meeting was held at the Abu Dhabi National Exhibition Centre under the patronage of His Excellency Sheikh Mansour bin Zayed Al Nahyan, Deputy Prime Minister of the UAE, Minister of Presidential Affairs and Chairman of ADAFSA. After nearly 10 years since the first global meeting, the purpose of this meeting was to bring members together to discuss recent Network developments, reinforce relationships, exchange experiences and inspire actions to strengthen INFOSAN in the future.

During the opening session, the keynote address from Steven Jaffee provided an overview of the World Bank's '[Safe Food Imperative](#)', which suggests that much of the health and economic burden of unsafe food can be avoided through preventive measures, investments, and behavioural changes adopted from farm-to-fork. It also draws attention to policies and approaches that governments can use to invest wisely in food safety, to better leverage private initiatives, and to engage effectively with consumers.

In session one, the INFOSAN Secretariat provided a global overview of INFOSAN to highlight progress and challenges faced during the past 15 years and to ensure participants had a clear understanding of their roles and responsibilities as INFOSAN members. The new INFOSAN Secretariat Strategic Plan 2020-2025 was presented as well as the new INFOSAN Members' Guide. The session concluded with a description of the INFOSAN Community Website and plans for the launch of an upgraded site in 2020.

During session two, the utilization of INFOSAN during international food safety events involving multiple countries around the world was demonstrated, showcasing different response systems and highlighting the usefulness of INFOSAN. As *Listeria monocytogenes* has been responsible



for some of the largest and most complex outbreaks communicated through INFOSAN in recent years, the panel was focused on events involving this pathogen. Experts from research institutions and food safety authorities explained how recent listeriosis outbreaks in South Africa, Spain and Hungary have reshaped the regulatory environment and benefitted from the application of WGS to effectively trace back to the source of this foodborne outbreak. They also showcased the key role that INFOSAN played in helping authorities from affected countries receive relevant information as well as technical support.

In session three, speakers illustrated the important links between INFOSAN and other regional networks. They discussed ways to improve collaboration across sectors and between programs to better manage food safety events. The regional networks discussed include the European RASFF, the Gulf Cooperation Council (GCC) Rapid Alert System for Food (RASf), the Arab RASFF, the Association of Southeast Asian Nations (ASEAN) RASFF and EFSA's EREN.

Session four provided an opportunity for some members to share experiences and tested solutions with respect to information exchange during food safety incidents nationally, between sectors and internationally. INFOSAN members from Canada and Australia explained their national procedures for sharing information about international recalls using INFOSAN. In addition, the process for investigating foodborne diseases and outbreaks in Abu Dhabi, UAE was elaborated.

Session five provided an opportunity for participants to engage in facilitated discussions to identify regional-specific challenges and solutions for enhancing participation in INFOSAN. Outcomes of these group discussions were presented by members of the INFOSAN Advisory Group and each provided important regional perspectives on how to overcome barriers to active participation in INFOSAN activities. Regional discussions illustrated the differences that exist between regions and justify continuing and increasing regional activities.

Session six provided an opportunity for members to share their experiences and tested solutions with respect to food safety event alert and response activities. The INFOSAN Emergency Contact Point from the Republic of Korea explained how the national food safety management system is organized as well as the functioning of their automatic sales blocking system used to prevent the consumers from purchasing recalled food products. The experiences of ADAFSA with respect to the utilization of a risk alert system were shared. The







INFOSAN Emergency Contact Point from Ghana detailed the experience of bringing together national stakeholders for a workshop to improve communication and collaboration on matters of food safety.

In Session seven, INFOSAN members from the USA and New Zealand highlighted their extraordinary past and ongoing efforts to support INFOSAN and provided their perspectives on how other INFOSAN members can become more active supporters and advocates for the Network.

In Session eight, the 'hard talk' delivered a fascinating discussion among experts on a range of emerging and important topics for food safety including whole genome sequencing, food fraud, e-Commerce, artificial intelligence and risk analysis.

In the closing session, the INFOSAN Secretariat presented the meeting outcomes which included a strengthened sense of community and willingness to collaborate and share information during food safety emergencies, among several others. The meeting was closed by Mouza al Muhairi, Policy and Regulation Executive Director, ADAFSA, UAE.

Taking advantage of the occasion to meet in person, two regional side meetings were held for INFOSAN members from the Americas and for Asia after the global meeting concluded.

Following the meeting, feedback collected from participants via an online evaluation survey was overwhelmingly positive. Several interesting topics to discuss at future meetings were suggested.

Complete details of the meeting proceedings have been published in the meeting report.<sup>10</sup>

<sup>10</sup> Available online: <https://www.who.int/publications-detail/9789240003934>

## Conclusion and Future Directions

INFOSAN is a member-driven network and several ways to improve the Network have been identified by members at various meetings and workshops. However, commitment from INFOSAN members to act as champions in their respective regions is required for agreed-upon actions identified in various fora to be implemented sustainably. The second global meeting of INFOSAN members proved a useful and inspiring exercise, bringing together many INFOSAN members to discuss how to participate actively in INFOSAN. The exchange of ideas and experiences related to the improvement of INFOSAN, advocacy for such improvements, and the encouragement of other INFOSAN members to be more active, effective and engaged, is central to the vision supported by the INFOSAN Secretariat. INFOSAN needs champions to show leadership as we all work towards strengthening the Network.

Much progress has been made during the biennium to strengthen INFOSAN, however, many challenges persist. While the proportion of event notifications coming directly from INFOSAN Emergency Contact Points or Focal Points increased in this biennium compared to previous years, there is room for improvement. Delays in reporting food safety events means that unsafe food can remain in the market, available to consumers for purchase, and can result in preventable foodborne illnesses in multiple countries. Proactive, cross-border and international sharing of information about food safety events is needed from members if INFOSAN is to fully reach its potential as an effective early warning communication tool.

Many of the gaps in membership that existed in previous years were addressed during the biennium, however, certain regions are lagging in engagement in INFOSAN and should be prioritized. In addition, partnership with regional networks should be prioritized to work collaboratively to achieve common goals. Furthermore, limitations in basic surveillance capacity to detect foodborne diseases and food safety events persist in many countries. This highlights the continued need for INFOSAN to partner with FAO and WHO capacity-building programmes to support the overall development of food safety systems. When national food safety systems are strengthened, INFOSAN members will become better equipped and capable of identifying, communicating, and responding to food safety emergencies.

The ongoing study of INFOSAN is aimed at exploring the experiences of members with respect to their participation in Network activities to improve global food safety and prevent foodborne illness. Specifically, this has been achieved by first examining the INFOSAN Community Website to characterize membership and understand members' patterns of access, usage and contribution. In addition, efforts have been made to gain a broad and deep understanding of the barriers and enablers to active participation in INFOSAN to prioritize interventions by the Secretariat to improve engagement. Furthermore, members' perceptions have been elicited in a rigorous way with respect to the utility of INFOSAN as a global communication tool for information exchange and the prevention of foodborne illness, especially during food safety emergencies. Upon conclusion of this study, the Secretariat shall be able to determine how participation in INFOSAN creates value for members and explore the mechanisms through which this may occur. Employing this kind of strategy will allow the Secretariat to better understand and measure the impact of the Network at the country-level and focus on addressing any critical gaps that are identified.

Encouraging the active participation of INFOSAN members continues to be a top priority for the Network. During the 2020/2021 biennium, FAO and WHO will continue to implement an INFOSAN work plan that focuses on:

1. the promotion of cross-sectoral collaboration and information sharing to optimize the response to foodborne health risks, including outbreaks; and
2. the development of countries' capacities to manage food safety (which includes the establishment and refinement of systems to monitor, assess and manage food safety incidents and emergencies).

In line with the new INFOSAN Secretariat Strategic Plan 2020-2025, this will be achieved by focusing on actions to achieve six main objectives:

1. Strengthen INFOSAN as the global network to detect and respond to international food safety emergencies to reduce their negative public health and trade impact;
2. Develop INFOSAN as a 'network of networks', connecting food safety professionals from across the world;
3. Use INFOSAN to bring together knowledge and experiences to increase food safety response capacity, globally;
4. Facilitate increased information sharing by improving the user experience of members on the INFOSAN Community Website;
5. Boost the visibility of INFOSAN through proactive communications and identify new funding opportunities to not only sustain, but expand INFOSAN activities; and
6. Gain a comprehensive understanding of barriers and facilitators to active participation in INFOSAN to prioritize interventions to increase member engagement.

For more details on specific actions to be taken, consult the INFOSAN Secretariat Strategic Plan 2020-2025.<sup>11</sup>

<sup>11</sup> Available online: <https://apps.who.int/iris/handle/10665/329913>

## Acknowledgments

FAO and WHO wish to express gratitude and appreciation to all our partners and donors for their generous financial and in-kind contributions in 2018/2019 which enabled INFOSAN to continue operating.



# Appendices

## APPENDIX A - INFOSAN EVENTS IN 2018

The information presented in this table does not disclose confidential information or pertain to any ongoing food safety incidents.

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Outbreak of Salmonellosis in the USA linked to shredded coconut from Viet Nam	11-Jan-2018	43	The Americas Region, Western Pacific Region	United States of America, Canada, Viet Nam	Biological	<i>Salmonella enterica</i> ser. Newport	Snacks, desserts, and other foods	(Frozen) Shredded Coconut
Outbreak of Botulism suspected in Nigeria	12-Jan-2018	3	African Region	Nigeria	Biological	<i>Clostridium botulinum</i> neurotoxin (BoNT)	Unknown	Unknown
Flavored sunflower Seeds from China containing undeclared allergen (peanuts) and distributed internationally	30-Jan-2018	8	Western Pacific Region, European Region	China, Australia, New Zealand, United Kingdom	Undeclared allergen	Peanut	Nuts and oilseeds	Sunflower seeds
Illnesses in Malaysia following the consumption of instant durian white coffee produced domestically and exported to Singapore	03-Feb-2018	5	Western Pacific Region	Malaysia, Singapore	Unknown	Unknown	Non-alcoholic beverages	Instant durian coffee
Ham products produced in France contaminated with <i>Listeria monocytogenes</i> and distributed internationally	12-Feb-2018	16	African Region, Eastern-Mediterranean Region, European Region, South-East Asian Region, Western Pacific Region	Andorra, Cameroon, Congo, Djibouti, France, Gabon, Guinea, Hong Kong SAR (China), Lebanon, Mauritius, New Caledonia (France), Senegal, Thailand	Biological	<i>Listeria monocytogenes</i>	Meat and meat products	Ham
Beef produced in Argentina contaminated with <i>Listeria monocytogenes</i> and distributed internationally	23-Feb-2018	7	European Region, Region of the Americas	Argentina, Austria, Germany, Hungary, Poland	Biological	<i>Listeria monocytogenes</i>	Meat and meat products	Pre-packaged salad greens

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Outbreak of norovirus in France linked to oysters produced domestically and distributed internationally	26-Feb-2018	11	African Region Eastern, Mediterranean Region, Western Pacific Region	Bahrain, Belgium, Côte d'Ivoire, Cyprus France, French Polynesia (France), Gabon, Hong Kong SAR (China), Italy Luxembourg, Qatar, Spain, Thailand, United Arab Emirates	Biological	Norovirus	Fish and other seafood	Oysters
Outbreak of listeriosis in Australia linked to rockmelon (cantaloupe) produced domestically and distributed internationally	02-March-2018	46	African Region Eastern, Mediterranean Region, Western Pacific Region	Australia, Bahrain, Hong Kong SAR (China), Japan, Kuwait, Malaysia, Oman, Qatar, Singapore, Seychelles	Biological	<i>Listeria monocytogenes</i>	Fruit and fruit products	Rockmelon (cantaloupe)
International recall of marshmallow candies produced in Sweden due to potential rodent infestation at the manufacturing plant	02-March-2018	49	European Region, Region of the Americas, South-East Asian Region, Western Pacific Region	Australia, Austria, Canada, China, Cyprus, Czech Republic (the), Denmark, Finland, France, Germany, Greece, Norway, Poland, Portugal, Russian Federation, Singapore, Slovakia, Republic of Korea, Spain, Sweden, Switzerland, Thailand, United Kingdom, United States of America	Biological	Rodent infestation	Sugar and confectionary	Marshmallow candies
Mixed seaweed product produced in the USA containing high levels of arsenic distributed to Australia	16-March-2018	1	Region of the Americas, Western Pacific Region	Australia, United States of America	Chemical	Arsenic	Vegetables and vegetable products	Seaweed

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Infant formula produced in the Netherlands with raw material from France contaminated with <i>C. sakazakii</i> and distributed internationally	23-March-2018	3	Eastern-Mediterranean Region, European Region, Western Pacific Region	Netherlands, China, Saudi Arabia, France, Germany, Switzerland, Viet Nam	Biological	<i>Cronobacter sakazakii</i>	Food for infants and small children	Infant Formula
Raw milk brie cheeses produced in France contaminated with <i>Listeria monocytogenes</i> and distributed internationally	23-March-2018	32	European Region, Region of the Americas, South-East Asian Region, Western Pacific Region	Australia, Austria, Belgium, Denmark, Finland, French Polynesia (France), Germany, Hong Kong SAR (China), Ireland, Italy, Luxembourg, Monaco, Netherlands, Philippines, Sint Maarten (Associate Member), Spain, Sweden, Switzerland, Thailand, United Kingdom, United States of America, Viet Nam, France	Biological	<i>Listeria monocytogenes</i>	Milk and dairy products	Raw milk brie cheeses
Goat's cheese produced in France contaminated with <i>Listeria monocytogenes</i> and distributed internationally	29-March-2018	2	European Region, Region of the Americas, Western Pacific Region	Austria, Belgium, Canada, France, Germany, Ireland, Malaysia, New Zealand, Singapore, Spain, Switzerland, Malta	Biological	<i>Listeria monocytogenes</i>	Milk and dairy products	Goat's cheese
Outbreak of salmonellosis in the USA linked to consumption of dried coconut products from Sri Lanka	04-April-2018	49	Region of the Americas, South-East Asian Region	Sri Lanka, United States of America	Biological	<i>Salmonella enterica</i> Typhimurium	Fruit and fruit products	Coconut products
Outbreak of salmonellosis in the USA linked to Kratom	05-April-2018	49	Region of the Americas	United States of America	Biological	<i>Salmonella enterica</i> ser. Javiana, Okatie, Thompson	Products for special nutritional use	Kratom

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Outbreak of Hepatitis A virus infections in Australia associated with frozen pomegranate from Egypt	09-April-2018	91	Eastern Mediterranean, Region Western Pacific Region	Australia, Egypt	Biological	Hepatitis A virus	Fruit and fruit products	Frozen pomegranate arils
Frozen grated coconut from the Philippines contaminated with <i>Salmonella</i> and distributed internationally	16-April-2018	31	Eastern Mediterranean Region, European Region, Region of the Americas, Western Pacific Region	Canada, United States of America, Philippines, Ireland, Saudi Arabia, United Kingdom	Biological	<i>Salmonella</i>	Fruit and fruit products	Frozen grated coconut
Outbreak of Hepatitis A virus infections in Canada linked to frozen strawberries from Egypt	16-April-2018	84	Eastern Mediterranean Region, Region of the Americas	Canada, Egypt	Biological	Hepatitis A virus	Fruit and fruit products	Frozen strawberries
Outbreak of salmonellosis in the USA linked to domestically produced shell eggs that were distributed internationally	17-April-2018	58	Eastern Mediterranean Region, Region of the Americas, Western Pacific Region	United States of America, Aruba (Associate Member), Bahamas (the), Cayman Islands (United Kingdom), Haiti, Hong Kong SAR (China), Sint Maarten (Associate Member), Turks and Caicos (United Kingdom), United Arab Emirates, Mexico	Biological	<i>Salmonella enterica</i> ser. Braenderup	Eggs and egg products	Eggs
Nut snack product produced in Thailand containing undeclared presence of peanuts distributed to Australia	11-May-2018	1	Western Pacific Region	Australia, Thailand	Undeclared allergen	Peanut	Nuts and oilseeds	Nut snack

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Outbreak of STEC infections in France linked to consumption of Reblochon cheese distributed internationally	12-May-2018	44	African Region, European Region, Region of the Americas, Western Pacific Region	Andorra, Belgium, Bulgaria, Canada, Cyprus, Czech Republic (the), Denmark, Germany, Hong Kong SAR (China), Hungary, Italy, Japan, Luxembourg, Malaysia, Mali, Mauritius, Netherlands, Poland, Portugal, Romania, Seychelles, Singapore, Spain, Switzerland, United Kingdom, United States of America	Biological	Shiga toxin-producing <i>Escherichia coli</i> O26:H11	Milk and dairy products	Reblochon cheese
Baby food from France distributed internationally recalled in Canada due to potential microbial contamination	31-May-2018	8	European Region, Region of the Americas	Canada, France	Biological	Packaging defects	Foods for infants and small children	Baby food pouches
Outbreak of <i>Salmonella</i> Agona infections in Europe (suspected to be linked to cucumbers)	07-June-2018	11	European Region	United Kingdom	Biological	<i>Salmonella enterica</i> ser. Agona	Unknown	Unknown
Garlic, chili, & Thai basil product produced in Australia distributed internationally to Singapore recalled in Australia	12-June-2018	1	Western Pacific Region	Singapore, Australia	Biological	Unknown bacteria	Herbs, spices and condiments	Garlic, chili, & Thai basil
Live oysters produced in France contaminated with <i>Escherichia coli</i> and distributed internationally	14-June-2018	5	Western Pacific Region, European Region, Eastern-Mediterranean Region	China, Denmark, France, Germany, Hong Kong SAR (China), Sweden, United Arab Emirates	Biological	<i>Escherichia coli</i>	Fish and other seafood	Live oysters

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Outbreak of Salmonellosis in the USA linked to domestically produced cereal distributed internationally	15-June-2018	81	Region of the Americas, Western Pacific Region	Aruba (Associate Member), Curaçao (Associate Member), Sint Maarten (Associate Member), Bahamas (the), Barbados, British Virgin Islands (United Kingdom), Costa Rica, Guatemala, Haiti, Mexico, Panama, French Polynesia (France), United States of America	Biological	<i>Salmonella enterica</i> ser. Mbandaka	Cereals and cereal-based products	Cereal
Reports of sugar contaminated with heavy metals imported into Kenya	25-June-2018	46	African Region	Kenya	Chemical/Toxin	Copper, Lead, Mercury	Sugar and confectionary	Sugar
Presence of undeclared shellfish in pork product from Republic of Korea distributed internationally	28-June-2018	1	Western Pacific Region	Australia, Republic of Korea	Undeclared Allergen	Shellfish	Meat and meat products	Pork product
Tinned sardines and mackerel manufactured in China contaminated with <i>Anisakis</i> and distributed internationally	29-June-2018	45	Western Pacific Region	China, Malaysia	Biological	Anisakis	Fish and other seafood	Tinned sardines and mackerel
Detection of undeclared shellfish in seafood dumpling from China distributed internationally	03-July-2018	1	Western Pacific Region	Australia, China	Undeclared Allergen	Shellfish	Fish and other seafood	Seafood dumpling (Gyoza)
Outbreak of Listeriosis linked to internationally distributed frozen vegetables from Hungary	03-July-2018	134	African Region, Eastern Mediterranean Region, European Region, Region of the Americas, South-East Asian Region, Western Pacific Region	Afghanistan, Algeria, Angola, Argentina, Australia, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Brazil, Bulgaria, Cameroon, Canada, Cape Verde, Central African Republic (the), Chile, Colombia, Côte d'Ivoire, Croatia, Cuba, Cyprus,	Biological	<i>Listeria monocytogenes</i>	Vegetables and vegetable products	Frozen corn, frozen vegetables

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
				Czech Republic (the), Denmark, Djibouti, Dominican Republic (the), Ecuador, Estonia, Finland, France, Germany, Ghana, Greece, Haiti, Hong Kong SAR (China), Hungary, Iceland, Iran (Islamic Republic of), Ireland, Israel, Italy, Jordan, Kuwait, Latvia, Liberia, Luxembourg, Mali, Malta, Mauritius, Mexico, Morocco, Netherlands, New Zealand, Nigeria, Oman, Panama, Papua New Guinea, Peru, Philippines, Poland, Portugal, Qatar, Romania, San Marino, Samoa, Saudi Arabia, Senegal, Singapore, Slovakia, Slovenia, South Africa, Republic of Korea, Sri Lanka, Sweden, Switzerland, Tunisia, Turkey, United Arab Emirates, United Kingdom United States of America, Uruguay, Tonga, Nauru, Bahrain, Belarus, Brunei Darussalam, Malaysia, Maldives, Seychelles, Viet Nam, Ukraine, Albania, Chad, Egypt, Gambia, Guinea, Japan, Mauritania,				



EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
				Republic of Montenegro, Sierra Leone, Thailand, Democratic Republic of the Congo (the), Georgia, Lithuania, Zambia, Namibia, Botswana, Congo, Eswatini, Antigua and Barbuda, Bahamas (the), Cayman Islands (United Kingdom), Iraq, Isle of Man, Lebanon, Monaco, Norway, Russian Federation, Spain				
Detection of <i>E. coli</i> in cheese from Italy distributed internationally	05-July-2018	1	European Region, Region of the Americas	Canada, Italy	Biological	<i>Escherichia coli</i>	Milk and dairy products	Burratina Tartufo cheese
Outbreak of botulism in Italy linked to the consumption of fennel and almond pesto distributed internationally	06-July-2018	5	European Region	Italy, Austria, Belgium, France, Germany, Lithuania, United States of America	Biological	<i>Clostridium botulinum</i>	Herbs, spices and condiments	Fennel and almond pesto
Detection of high levels of iodine in dried seaweed from the Republic of Korea distributed internationally	09-July-2018	44	European Region, Western Pacific Region	Republic of Korea, Republic of Moldova, Germany, Austria, Denmark, Finland, Hungary, Poland	Chemical/Toxin	Iodine	Snacks, desserts, and other foods	Dried seaweed
Detection of <i>Salmonella</i> in pine nut kernels from China distributed internationally	10-July-2018	41	European Region, Western Pacific Region	Belgium, China, Czech Republic (the), Denmark, France, Germany, Italy, Luxembourg, United Kingdom, Netherlands	Biological	<i>Salmonella</i> spp.	Nuts and oilseeds	Pine nut kernels

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Presence of glass fragments in fish, soy and teriyaki sauces from Malaysia distributed internationally	10-July-2018	3	European Region, Western Pacific Region	Austria, Bulgaria, Czech Republic (the), Germany, Greece, Hungary, Ireland, Poland, Romania, Malaysia, Slovakia, Slovenia, United Kingdom	Physical	Glass	Herbs, spices and condiments	Fish soy and teriyaki sauces
Outbreak of histamine poisoning in La Réunion (France) linked to frozen yellowfin tuna from Viet Nam	10-July-2018	7	European Region, Western Pacific Region	France, Viet Nam	Chemical/ Toxin	Histamine (including Scombrotoxin)	Fish and other seafood	Frozen yellowfin tuna
<i>Salmonella</i> Weltevreden in grated coconut from Indonesia distributed internationally	10-July-2018	67	European Region, Western Pacific Region	Andorra, Belgium, Indonesia, Portugal, Singapore	Biological	<i>Salmonella enterica</i> ser. Weltevreden	Snacks, desserts, and other foods	Grated coconut
Detection of <i>Salmonella</i> in raw milk goat cheese from France distributed internationally	10-July-2018	3	European Region, Western Pacific Region	Austria, Belgium, Denmark, Finland, Germany, Hungary, Italy, France, Netherlands, Norway, Poland, Portugal, Singapore, Spain, Switzerland, Vanuatu	Biological	<i>Salmonella</i> spp.	<i>Salmonella</i> spp.	Raw milk goat cheese
Detection of <i>Salmonella</i> in cumin powder and seeds from Egypt distributed internationally	10-July-2018	6	Eastern-Mediterranean Region, European Region	Austria, Bulgaria, Egypt, France, Saudi Arabia, Spain, United Kingdom	Biological	<i>Salmonella</i> spp.	Herbs, spices and condiments	Cumin seeds and cumin powder
Presence of metal pieces in organic date paste from Saudi Arabia distributed internationally	10-July-2018	2	Eastern-Mediterranean Region, European Region	Belgium, Bulgaria, Czech Republic (the), Denmark, France, Germany, Italy, Poland, Netherlands, Saudi Arabia, Romania, Switzerland, United Kingdom	Physical	Metal	Fruit and fruit products	Organic date paste
Outbreak of <i>Vibrio parahaemolyticus</i> infections in the USA linked to fresh crab meat from Venezuela	15-July-2018	33	Region of the Americas	United States of America, Venezuela (Bolivarian Republic of)	Biological	<i>Vibrio parahaemolyticus</i>	Fish and other seafood	Fresh crab meat

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Detection of metal wires in milk powder manufactured in Finland distributed internationally	24-July-2018	17	European Region, Western Pacific Region	Australia, Belgium, China, Croatia, Estonia, France, Germany, Hungary, Italy, Netherlands, Poland, Portugal, Spain, Sweden, Republic of Korea, United Kingdom, Viet Nam	Physical	Metal	Milk and dairy products	Lactose free whole milk powder
Excess levels of Boron in mineral water from Turkey distributed internationally	24-July-2018	94	European Region	Poland, Switzerland, Turkey	Chemical/Toxin	Boron	Non-alcoholic beverages	Mineral water
Detection of metal fragments in coconut flour from Sri Lanka distributed internationally	25-July-2018	19	Eastern-Mediterranean Region, European Region, Region of the Americas, South-East Asian Region	Belgium, Bulgaria, Croatia, Czech Republic (the), Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Poland, Portugal, Sri Lanka, Slovakia, Slovenia, Spain, Sweden, United Kingdom, Switzerland, Lebanon, Peru	Physical	Metal	Snacks, desserts, and other foods	Coconut flour
Detection of <i>Salmonella</i> in live oysters from Canada distributed internationally	04-Aug-2018	5	European Region, Region of the Americas	Canada, Norway	Biological	<i>Salmonella</i> spp.	Fish and other seafood	Live oysters
Outbreak of Cyclosporiasis in the USA linked to the consumption of pre-made salad mix	07-Aug-2018	4	Region of the Americas	United States of America	Biological	<i>Cyclospora cayentanensis</i>	Vegetables and vegetable products	Pre-made salad mix
Suspected foodborne illnesses in Peru linked to an unknown food	09-Aug-2018	14	Region of the Americas	Peru	Unknown	Unknown	Unknown	Unknown
Detection of fungus and <i>S. aureus</i> in infant formula in Chile originating from the Netherlands	09-Aug-2018	31	European Region, Region of the Americas	Bolivia, Chile, Netherlands	Biological	<i>Staphylococcus aureus</i>	Foods for infants and small children	Infant formula

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Recall in the USA of internationally distributed biscuits due to <i>Salmonella</i> contamination	09-Aug-2018	18	Region of the Americas	El Salvador, United States of America, Puerto Rico (Associate Member)	Biological	<i>Salmonella</i> spp.	Snacks, desserts, and other foods	Biscuits
Detection of <i>Bacillus cereus</i> in dessert product manufactured in France and distributed internationally	13-Aug-2018	51	African Region, Eastern-Mediterranean Region, European Region, Region of the Americas, Western Pacific Region	Belgium, Benin, Côte d'Ivoire, Cyprus, France, Gabon, Haiti, Lebanon, Luxembourg, Mali, New Caledonia (France), Rwanda, Ukraine	Biological	<i>Bacillus cereus</i>	Snacks, desserts, and other foods	Dessert product
Outbreak of salmonellosis in France linked to consumption of raw milk goat cheese distributed internationally	13-Aug-2018	10	African Region, European Region, Western Pacific Region	Belgium, Côte d'Ivoire, France, Germany, Hong Kong SAR (China), Japan, Luxembourg, Spain, United Kingdom	Biological	<i>Salmonella</i> spp.	Milk and dairy products	Raw milk goat cheese
Detection of glass fragments in bulk packaged sea salt from Israel and distributed internationally	20-Aug-2018	7	European region	Israel, United Kingdom	Physical	Glass	Herbs, spices and condiments	Bulk packaged sea salt
Recall in Singapore of internationally distributed infant formula due to contamination with <i>Cronobacter sakazakii</i>	21-Aug-2018	55	Western Pacific Region	Malaysia, Singapore	Biological	<i>Cronobacter sakazakii</i>	Foods for infants and small children	Infant formula
Detection of high levels of iodine in dried algae from the Republic of Korea and distributed internationally	23-Aug-2018	12	European Region, Western Pacific Region	Austria, Germany, Republic of Korea, Spain	Chemical/Toxin	Iodine	Snacks, desserts, and other foods	Dried algae
Detection of <i>Salmonella</i> in organic cardamom powder from Guatemala distributed internationally	30-Aug-2018	5	European Region, Region of the Americas, Western Pacific Region	Austria, Belgium, Bulgaria, Czech Republic (the), Denmark, France, Germany, Greece, Guatemala, Hungary, Italy, Latvia, Lithuania,	Biological	<i>Salmonella</i> spp.	Herbs, spices and condiments	Cardamom powder

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
				Luxembourg, Norway, Poland, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Netherlands, New Zealand, United Kingdom				
Recall in the Republic of Korea of infant formula from France due to contamination with <i>Clostridium perfringens</i>	06-Sept-2019	33	European Region, Western Pacific Region	France, Republic of Korea	Biological	<i>Clostridium perfringens</i>	Food for infants and small children	Goat milk infant formula
Recall in Jordan of domestically produced bottled water due to the detection of <i>Pseudomonas</i> bacteria	12-Sept-2019	7	Eastern-Mediterranean Region	Jordan	Biological	<i>Pseudomonas</i>	Non-alcoholic beverages	Bottled water
Intentional contamination of domestically produced strawberries in Australia with needles	17-Sept-2018	55	Western Pacific Region	Australia, New Zealand	Physical	Metal (needle)	Fruit and fruit products	Fresh strawberries
Outbreak of Salmonellosis in the USA linked to the consumption of ground beef distributed internationally	06-Oct-2018	3	Region of the Americas	Mexico, United States of America	Biological	<i>Salmonella enterica</i> ser. Newport	Meat and meat products	Ground beef
Detection of <i>Salmonella</i> in processed cheese cubes from the Netherlands distributed internationally	08-Oct-2018	2	European Region, Western Pacific Region	Malaysia, Netherlands	Biological	<i>Salmonella</i> spp.	Milk and dairy products	Cheese cubes
Recall in the United Kingdom of chocolate covered goji berries due to potential contamination with metal pieces	08-Oct-2018	64	Eastern Mediterranean, European Region	Czech Republic (the), Denmark, Estonia, Hungary, Iceland, Ireland, Jordan, Portugal, Slovakia, Slovenia, Spain, Sweden, United Kingdom	Physical	Metal	Fruit and fruit products,	Chocolate goji berries and plain goji berries
Detection of <i>Salmonella</i> Mbandaka in Buttermilk powder from Ireland distributed internationally	19-Oct-2018	6	European Region, Western Pacific Region	Belgium, Denmark, Ireland, Malaysia, Netherlands, Russian Federation, United Kingdom	Biological	<i>Salmonella enterica</i> ser. Mbandaka	Milk and dairy products	Buttermilk powder and skim whey protein blend

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Detection of Norovirus in frozen boiled whole clams from Viet Nam internationally distributed	26-Oct-2018	3	European Region, Western Pacific Region	Belgium, Germany, Portugal, United Kingdom, Viet Nam	Biological	Norovirus	Fish and other seafood	Frozen boiled whole clams
Detection of <i>Salmonella</i> Weltevreden in frozen cooked whiteleg shrimps from Viet Nam internationally distributed	26-Oct-2018	3	European Region, Western Pacific Region	United Kingdom, Viet Nam	Biological	<i>Salmonella enterica</i> ser. Weltevreden	Fish and other seafood	Frozen cooked whiteleg shrimps
Detection of <i>Listeria monocytogenes</i> in chilled pre-cooked falafel from France internationally distributed	26-Oct-2018	1	African Region, European Region	Belgium, Democratic Republic of the Congo (the), France, Luxembourg, Spain, Switzerland	Biological	<i>Listeria monocytogenes</i>	Snacks, desserts, and other foods	Chilled pre-cooked falafel
Recall in Australia of dairy free cheese due to the presence of an undeclared allergen (milk)	26-Oct-2018	1	European Region, Region of the Americas, Western Pacific Region	Australia, France, Canada, Denmark	Undeclared Allergen	Milk	Products for special nutritional use	Dairy free cheese
Recall in Australia of confectionary (lollipops) from China due to the detection of metal	29-Oct-2018	3	Western Pacific Region	Australia, China	Physical	Metal	Sugar and confectionary	Lollipops
Recall in Canada of Cilantro (Ngô Gai) from Viet Nam due to the detection of <i>Salmonella</i>	01-Nov-2018	36	Region of the Americas, Western Pacific Region	Canada, Viet Nam	Biological	<i>Salmonella</i> spp.	Herbs, spices and condiments	Cilantro
Recall in the USA of imported curry powders due to the detection of high levels of lead	02-11-2018	69	Region of the Americas	United States of America	Chemical/Toxin	Lead	Herbs, spices and condiments	Curry spice
Recall in Australia of Snow Crab from Chile due to the detection of <i>Listeria monocytogenes</i>	05-11-2018	9	Region of the Americas, Western Pacific Region	Australia, Chile	Biological	<i>Listeria monocytogenes</i>	Fish and other seafood	Snow crab
Recall in Australia of confectionary from China due to choking hazard	15-Nov-2015	1	Western Pacific Region	Australia, China	Physical	Choking hazard	Sugar and confectionary	Confectionary

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Outbreak of salmonellosis in Canada, Israel and the USA linked to tahini manufactured in Israel	20-Nov-2018	30	African Region, European Region, Region of the Americas, Western Pacific Region	Belgium, Canada, Czech Republic (the), France, Hungary, Kenya, New Zealand, South Africa, United Kingdom, United States of America	Biological	<i>Salmonella</i> ser. Concord	Nuts and oilseeds	Tahini
Outbreak of <i>E. coli</i> O157:H7 infections in Canada and the USA linked to the consumption of romaine lettuce	22-Nov-2018	14	Region of the Americas	Canada, United States of America, Mexico	Biological	<i>E. coli</i> O157:H7	Vegetables and vegetable products	Romaine lettuce
Recall in New Zealand of rice flour from Pakistan due to detection of metal wires	26-Nov-2018	23	Mediterranean Region, Western Pacific Region	New Zealand, Pakistan	Physical	Metal	Cereals and cereal-based products	Rice flour
Outbreak of Salmonellosis (serotype Goldcoast) in the Netherlands linked to domestically produced pork meat products, distributed internationally	03-Dec-2018	63	African Region, Eastern-Mediterranean Region, European Region, Region of the Americas, South-East Asian Region, Western Pacific Region	Angola, Austria, Bahrain, Belgium, Bulgaria, Canada, China, Congo, Croatia, Cyprus, Czech Republic (the), Denmark, Equatorial Guinea, France, Gabon, Germany, Ghana, Greece, Hong Kong SAR (China), Hungary, Ireland, Italy, Liberia, Luxembourg, Malta, Monaco, Netherlands, Oman, Philippines, Poland, Portugal, Republic of Korea, Romania, Singapore, Slovakia, Spain, Suriname, Thailand, Timor-Leste, United Kingdom	Biological	<i>Salmonella</i> ser. Goldcoast	Meat and meat products	Pork products



EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Recall in Australia of Mayonnaise from Germany due to a packaging fault	06-Dec-2018	1	European Region, Western Pacific Region	Australia, Germany	Physical	Glass	Herb, spices and condiments	Mayon-naise
Recall in the USA of Canned Fiesta Corn Seasoned with Red & Green Peppers due to under processing	14-Dec-2018	6	Region of the Americas	Bahamas (the), Barbados, Bermuda (United Kingdom), El Salvador, Haiti, Guyana, Uruguay, Aruba (Associate Member), Panama, Saint Lucia, Suriname, United States of America	Biological	Potential contamination due to under processing	Vegetables and vegetable products	Canned Fiesta Corn Seasoned with Red & Green Peppers

## APPENDIX B - INFOSAN EVENTS IN 2019

The information presented in this table does not disclose confidential information or pertain to any ongoing food safety incidents.

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Recall in Australia of food products from China due to potential presence of glass and peanuts	04-Jan-2019	2	Western Pacific Region	Australia, China	Physical; Undeclared allergen	Glass; peanut	Nuts and oilseeds	Chilli oil and nuts
Recall in Australia of raw apricot kernels from Turkey due to contamination with hydrocyanic acid	11-Jan-2019	1	European Region, Western Pacific Region	Australia, Turkey	Toxin/ Chemical	Hydrocyanic Acid	Nuts and oilseeds	Raw apricot kernels
Recall in Canada of raw milk cheese from Italy following the detection of <i>Listeria monocytogenes</i>	15-Jan-2019	1	European Region, Region of the Americas	Canada, Italy	Biological	<i>Listeria monocytogenes</i>	Milk and dairy products	Raw sheep's cheese
Recall in Australia of confectionary from China due to the potential presence of plastic	21-Jan-2019	1	Western Pacific Region	Australia, China	Physical	Plastic	Sugar and confectionary	Confectionary
Recall in Canada of Red Chili from Viet Nam due to presence of <i>Salmonella</i>	22-Jan-2019	1	Region of the Americas, Western Pacific Region	Canada, Viet Nam	Biological	<i>Salmonella</i> sp.	Vegetables and vegetable products	Red chilli
Recall of fresh peaches, fresh nectarines and fresh plums from Chile due to the potential presence of <i>Listeria monocytogenes</i>	28-Jan-2019	9	Region of the Americas	Chile, Brazil, Colombia, Dominican Republic, El Salvador, Guatemala, Panama, Puerto Rico (Associate Member), United States of America	Biological	<i>Listeria monocytogenes</i>	Fruit and fruit products	Fresh peaches, fresh nectarines and fresh plums
Suspected outbreak of Botulism in Brazil possibly linked to consumption of canned green corn	19-Feb-2019	35	Region of the Americas	Brazil	Biological	<i>Clostridium botulinum</i>	Cereals and cereal-based products	Canned green corn
Withdrawal in the United Kingdom of sugar from Belize due to presence of metal pieces	20-Feb-2019	1	European Region, Region of the Americas	Belize, United Kingdom, Belgium, Cyprus, France, Germany, Lithuania, Netherlands, Poland, Portugal, Romania	Physical	Metal	Sugar and confectionary	Sugar
Recall of Rösti from Belgium due to the detection of glass fragments, distributed internationally	22-Feb-2019	5	African Region, European Region	Belgium, France, Hungary, Luxembourg, Senegal	Physical	Glass	Starchy roots and tubers	Frozen Rösti

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Recall of Reblochon cheese in France due to the detection of <i>Salmonella</i> , distributed internationally	4-March-2019	2	European Region	Andorra, Belgium, France, Portugal, Switzerland	Biological	<i>Salmonella</i> sp.	Milk and dairy products	Reblochon cheese
Recall of goat raw milk cheese in France due to the detection of shigatoxin-producing <i>Escherichia coli</i> O157:H7, distributed internationally	5-March-2019	8	African Region, European Region, Western Pacific Region	Austria, Belgium, Croatia, Denmark, Germany, Hong Kong SAR (China), Italy, Malaysia, Netherlands, Romania, Singapore, South Africa, Spain, United Kingdom, Viet Nam	Biological	<i>Escherichia coli</i> O157:H7	Milk and dairy products	Goat raw milk cheese
Recall in the United Kingdom of hazelnuts from Turkey due to the presence of <i>Salmonella</i>	6-March-2019	36	European Region	Turkey, United Kingdom	Biological	<i>Salmonella</i> sp.	Nuts and oilseeds	Hazelnuts
Death of babies in a neonatal unit in Tunisia linked to the consumption of a food preparation for premature children	12-March-2019	24	Eastern Mediterranean Region	Tunisia	Unknown	Unknown	Food for infants and small children	Parenteral nutrition product
Outbreak of ciguatera fish poisoning in Martinique (France) linked to frozen fish from Viet Nam	12-March-2019	1	European Region, Region of the Americas, Western Pacific Region	France, Martinique (France), Viet Nam	Toxin/ Chemical	Ciguatera toxin	Fish and other seafood	Frozen thazard
Detection of <i>Escherichia coli</i> in camembert cheese from France distributed internationally	15-March-2019	1	European Region, Western Pacific Region	France, Germany, Hungary, Japan, Portugal, Slovenia	Biological	<i>Escherichia coli</i> O26:H11	Milk and dairy products	Camembert cheese
Outbreak of <i>Salmonella</i> Poona infections linked to internationally distributed infant formula	15-March-2019	33	Eastern Mediterranean Region, European Region, Region of the Americas, Western Pacific Region	Andorra, Belgium, Denmark, Ecuador, France, Germany, Italy, Libya, Luxembourg, Mexico, Monaco, Morocco, Netherlands, Norway, Peru, Portugal, Romania, Saudi Arabia, Spain, Switzerland, Syrian Arab Republic, Tunisia, United Arab Emirates, United Kingdom, Viet Nam	Biological	<i>Salmonella</i> Poona	Products for special nutritional use	Powdered rice based infant formula

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Detection of glass fragments in tandoori marinade paste from the United Kingdom distributed internationally	20-March-2019	15	African Region, European Region	Austria, Belgium, Czech Republic, Cyprus, Denmark, Finland, Germany, Luxembourg, Netherlands, Romania, Seychelles, Slovenia, Sweden	Physical	Glass	Snacks, desserts, and other foods	Tandoori marinade paste
Outbreak of Salmonellosis in Norway linked to the consumption of dried fruit and nut mix from Italy distributed internationally	20-March-2019	1	African Region European Region South-East Asian Region Western Pacific Region	Austria, France, Ghana, Norway, San Marino, Thailand, Turkey, Italy, Philippines	Biological	<i>Salmonella</i> Agbeni and Gamaba	Nuts and oilseeds; Fruit and fruit products	Dried fruit and nut mix
Detection of <i>Listeria monocytogenes</i> in frozen corn from Turkey distributed internationally	26-March-2019	1	European Region	Turkey, United Kingdom	Biological	<i>Listeria monocytogenes</i>	Vegetables and vegetable products	Frozen sweet corn
Detection of <i>Escherichia coli</i> in Oysters from Ireland distributed internationally	29-March-2019	9	European Region, Region of the Americas	Canada, Ireland	Biological	<i>Escherichia coli</i>	Fish and other seafood	Gigas oysters
Detection of foreign matter and mould in Snack Bars from Australia distributed internationally	01-Apr-2019	1	Western Pacific Region, Region of the Americas	Australia United States of America	Physical; Biological	Plastic; Yeast/ Fungi	Snacks, desserts, and other foods	Snack bars
Recall in Australia of yogurt fruit blend due to the presence of an undeclared allergen (almond)	01-Apr-2019	1	Western Pacific Region	Australia, Malaysia, Singapore	Undeclared allergen	Almond	Composite food	Yogurt fruit blend
Recall in Australia of organic raspberry chocolate due to the presence of an undeclared allergen (pistachio)	01-Apr-2019	1	Western Pacific Region	Australia, Japan	Undeclared allergen	Pistachio	Snacks, desserts, and other foods	Organic raspberry chocolate
Detection of <i>Listeria monocytogenes</i> in raw milk cheese from France distributed internationally	02-Apr-2019	2	European Region, Region of the Americas, Western Pacific Region	Canada, Denmark, France, Germany, Japan	Biological	<i>Listeria monocytogenes</i>	Milk and dairy products	Raw goat milk cheese
Recall in Canada of chicken nuggets due to detection of <i>Salmonella</i>	11-Apr-2019	1	European Region, Region of the Americas	Canada, France	Biological	<i>Salmonella</i> sp.	Meat and meat products	Chicken nuggets

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Outbreak of listeriosis in France linked to the consumption of coulommiers cheese from France	12-Apr-2019	29	African Region, Eastern Mediterranean Region, European Region, Region of the Americas, South-East Asian Region, Western Pacific Region	Australia, Austria, Belgium, China, Croatia, Democratic Republic of the Congo (the), Denmark, France, French Polynesia (France), Germany, Hong Kong SAR (China), Ireland, Italy, Japan, Luxembourg, Macau SAR (China), Mauritius, Myanmar, Netherlands, Norway, Oman, Philippines, Poland, Romania, Senegal, Singapore, Sint Maarten (Associate Member), South Africa, Spain, Sweden, Switzerland, United Arab Emirates, United Kingdom, United States of America	Biological	<i>Listeria monocytogenes</i>	Milk and dairy products	Coulommiers cheese, Brie
Recall in Canada of coconut meat from Thailand due to contamination with <i>Salmonella</i>	15-Apr-2019	21	Region of the Americas, South-East Asian Region	Canada, Thailand	Biological	<i>Salmonella</i> sp.	Fruit and fruit products	Coconut meat
Outbreak of <i>Salmonella</i> infections in Canada linked to profiteroles and eclairs from Thailand	27-Apr-2019	12	Region of the Americas, South-East Asian Region, Western Pacific Region	Australia, Canada, Thailand	Biological	<i>Salmonella</i> sp.	Snacks, desserts, and other foods	Profiteroles and eclairs
Outbreak of Hepatitis A virus infections in Sweden suspected to be linked to fresh dates from Iran	29-Apr-2019	2	Eastern Mediterranean Region, European Region, Western Pacific Region	Iran (Islamic Republic of), New Zealand, Sweden	Biological	Hepatitis A	Fruit and fruit products	Fresh dates
Detection of <i>Salmonella</i> in Tignernuts from Spain, distributed internationally	29-Apr-2019	1	European Region, Region of the Americas	Austria, Canada, France, Germany, Italy, Netherlands, Portugal, Spain, United Kingdom	Biological	<i>Salmonella</i> sp.	Nuts and oilseeds	Skinned Tignernuts

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Outbreak of shiga toxin-producing <i>Escherichia coli</i> (STEC) infections in France linked to raw milk cheese from France, distributed internationally	30-Apr-2019	13	African Region, Eastern Mediterranean Region, European Region, Region of the Americas, Western Pacific Region	Austria, Belgium, Canada, Côte d'Ivoire, Czech Republic (the), Denmark, France, Germany, Hungary, Ireland, Italy, Lithuania, Malaysia, Netherlands, New Zealand, Philippines, Poland, Portugal, Qatar, Singapore, South Africa, Spain, Sweden, Switzerland, Ukraine, United Arab Emirates, United Kingdom, United States of America	Biological	<i>Escherichia coli</i> O26	Milk and dairy products	Raw milk cheese
Detection of <i>Salmonella</i> in Chlorella powder from India, distributed internationally	3-May-2019	31	European Region, Region of the Americas, South-East Asian Region	Belgium, Cyprus, Czech Republic (the), Estonia, France, Germany, India, Luxembourg, Netherlands, Norway, Peru, Portugal, Romania, Spain, Switzerland	Biological	<i>Salmonella</i> sp.	Products for special nutritional use	Organic chlorella powder
Recalls in the USA of frozen, ready-to-eat chicken strip products due to possible foreign matter contamination	6-May-2019	14	Region of the Americas	Bahamas (the), United States of America	Physical	Metal	Meat and meat products	Frozen ready-to-eat chicken strips
Detection of <i>Listeria monocytogenes</i> in goat milk cheese from France, distributed internationally	8-May-2019	4	European Region, South-East Asian Region, Western Pacific Region	France, Luxembourg, Netherlands, Thailand, United Kingdom, Viet Nam	Biological	<i>Listeria monocytogenes</i>	Milk and dairy products	Raw milk goat cheese
Detection of shiga toxin-producing <i>Escherichia coli</i> in raw milk cheese from France, distributed internationally	14-May-2019	3	Eastern Mediterranean Region, European Region, Region of the Americas, Western Pacific Region	Austria, Belgium, Canada, France, French Polynesia (France), Germany, Italy, Luxembourg, Morocco, Netherlands, Portugal, Spain, Sweden, Switzerland, United Kingdom	Biological	<i>Escherichia coli</i>	Milk and dairy products	Raw milk cheese
Outbreak of salmonellosis in Israel and the USA linked to tahini imported from Israel	21-May-2019	8	African Region, Eastern, Mediterranean Region, European Region, Region of the Americas	Israel, United States of America, Ethiopia	Biological	<i>Salmonella</i> <i>Concord</i>	Herbs, spices and condiments	Tahini

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Recall in the USA of beef products due to possible foreign matter contamination	22-May-2019	9	Region of the Americas	Bahamas (the), United States of America	Physical	Metal	Meat and meat products	Vienna beef frank links
Recall in Australia of miso and edamame dip due to potential contamination with <i>Listeria monocytogenes</i> , distributed internationally	23-May-2019	1	Western Pacific Region	Australia, China, Hong Kong SAR (China)	Biological	<i>Listeria monocytogenes</i>	Herbs, spices and condiments	Miso and edamame dip
Detection of <i>Vibrio parahaemolyticus</i> in frozen raw whole shrimps from Ecuador, distributed internationally	30-May-2019	18	European Region, Region of the Americas	Ecuador, France, Spain	Biological	<i>Vibrio parahaemolyticus</i>	Fish and other seafood	Frozen raw whole shrimps
Recall in the USA of ready-to-eat jalapeño cheddar smoked sausage links due to possible foreign matter contamination	31-May-2019	6	Region of the Americas, Western Pacific Region	China, Costa Rica, Hong Kong SAR (China), United States of America	Physical	Plastic	Meat and meat products	Sausage links
Recall in Australia of tacos from USA due to the presence of an undeclared allergen (gluten)	3-June-2019	1	Region of the Americas, Western Pacific Region	Australia, United States of America	Undeclared allergen	Gluten	Cereals and cereal-based products	Tacos
Recall in Canada of ground spice from Nigeria due to possible contamination with <i>Salmonella</i>	4-June-2019	1	African Region, Region of the Americas	Canada, Nigeria	Biological	<i>Salmonella</i> sp.	Herbs, spices and condiments	Ground spice
Recall in the United Kingdom of pickled sliced beetroot due to foreign matter contamination	4-June-2019	15	African Region, Eastern Mediterranean Region, European Region, Region of the Americas, Western Pacific Region	Bahamas (the), Belgium, Bermuda (United Kingdom), Cyprus, Ghana, Gibraltar (United Kingdom), Singapore, Spain, United Arab Emirates, United Kingdom	Physical	Glass	Vegetables and vegetable products	Pickled sliced beetroot
Recall in Canada of frozen raspberries from Chile due to possible contamination with Norovirus	4-June-2019	4	Region of the Americas	Canada, Chile	Biological	Norovirus	Fruit and fruit products	Frozen raspberries
Recall in the United States of frozen blackberries and three berry blends due to potential Hepatitis A Virus contamination	12-June-2019	1	Region of the Americas	United States of America	Biological	Hepatitis A	Fruit and fruit products	Blackberries



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Detection of <i>Vibrio vulnificus</i> in frozen wild giant tiger shrimps from Viet Nam, distributed internationally	12-June-2019	20	European Region, Western Pacific Region	France, Viet Nam	Biological	<i>Vibrio vulnificus</i>	Fish and other seafood	Frozen wild giant tiger shrimps
Recall of rice flavourings in Australia due to the presence of undeclared allergens from the Republic of Korea	13-June-2019	1	Western Pacific Region	Australia, Republic of Korea	Undeclared allergen	Egg; milk	Snacks, desserts, and other foods	Rice flavourings
Recall in Australia of dried frozen mud fish from Thailand due to a chemical residue contamination	17-June-2019	1	South-East Asian Region, Western Pacific Region	Australia, Thailand	Toxin/chemical	Unknown	Fish and other seafood	Dried frozen mud fish
Recall in Austria of cardamom from Lebanon due to the detection of <i>Bacillus cereus</i>	17-June-2019	6	Eastern Mediterranean Region, European Region	Austria, Germany, Lebanon	Biological	<i>Bacillus cereus</i>	Herbs, spices and condiments	Cardamom
Warning in Canada concerning all products manufactured by Konsar Future Nutrition Inc.	19-June-2019	6	African Region, Eastern Mediterranean Region, European Region, Region of the Americas, South-East Asian Region, Western Pacific Region	Algeria, Australia, Canada, China, Croatia, Czech Republic (the), Egypt, France, Hungary, India, Indonesia, Iran (Islamic Republic of), Israel, Italy, Jordan, Kuwait, Malaysia, Netherlands, Qatar, Thailand, Tunisia, Turkey, United Arab Emirates, United States of America	Other	Other	Products for special nutritional use	Natural Health Products
Outbreak of Salmonellosis in the USA linked to papaya from Mexico	1-July-2019	1	Region of the Americas	Mexico, United States of America	Biological	<i>Salmonella</i> Uganda	Fruit and fruit products	Papayas
Detection of plastic fragments in frozen chicken dippers from Germany, distributed internationally	2-July-2019	2	European Region, South-East Asian Region	Cyprus, Czech Republic (the), Germany, Ireland, Malta, Spain, Thailand, United Kingdom	Physical	Plastic	Meat and meat products	Chicken nuggets
Recall in Canada of Coulommiers cheese from France due to presence of <i>Listeria monocytogenes</i>	3-July-2019	1	European Region, Region of the Americas	Belgium, Canada, Denmark, France, Germany, Lithuania	Biological	<i>Listeria monocytogenes</i>	Milk and dairy products	Raw milk cow cheese

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Detection of glass fragments in sesame seeds from the Nigeria, distributed internationally	5-July-2019	6	African Region, Eastern Mediterranean Region, European Region, South-East Asian Region, Western Pacific Region	Belgium, China, Greece, Hungary, India, Netherlands, Nigeria, Oman, Pakistan, United Arab Emirates	Physical	Glass	Legumes and pulses	Sesame seeds
Outbreak of methanol poisonings in Costa Rica linked to the consumption of fraudulent liquor	8-July-2019	126	Region of the Americas	Costa Rica	Toxin/chemical	Methanol	Alcoholic beverages	Guaro
Detection of <i>Escherichia coli</i> in goat milk cheese from France, distributed internationally	9-July-2019	6	European Region, Western Pacific Region	France, China, Hong Kong SAR (China), Ireland, Italy, Netherlands, Portugal, Romania, Singapore, Spain, United Kingdom	Biological	<i>Escherichia coli</i>	Milk and dairy products	Goat milk cheese
Recall in Canada of cheese from Poland due to presence of <i>Listeria monocytogenes</i>	24-July-2019	1	European Region, Region of the Americas	Canada, Poland, Netherlands, United Kingdom	Biological	<i>Listeria monocytogenes</i>	Milk and dairy products	Cheese
Recall in Australia of crisp cake from China due to the detection of undeclared allergens (walnut and cashew)	31-July-2019	1	Western Pacific Region	Australia, China	Undeclared allergen	Cashew; walnut	Snacks, desserts, and other foods	Crisp cake
Recall in France of raw milk Roquefort cheese from France due to detection of <i>Salmonella</i> , distributed internationally	5-Aug-2019	4	African Region, Eastern Mediterranean Region, European Region, Region of the Americas, Western Pacific Region	Andorra, Belgium, Congo, France, Gabon, Germany, Greece, Italy, Japan, Lebanon, Netherlands, Norway, Senegal, Seychelles, Spain, Togo, Austria, Luxembourg, Portugal, United States of America	Biological	<i>Salmonella</i> sp.	Milk and dairy products	Raw milk cheese
Detection in the Netherlands of <i>Salmonella</i> in raw frozen tuna from Viet Nam	13-Aug-2019	2	European Region, Western Pacific Region	Austria, Germany, Italy, Netherlands, Poland, Viet Nam	Biological	<i>Salmonella</i> sp.	Fish and other seafood	Raw frozen tuna

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Outbreak of Norovirus infections in Europe linked to wakame seaweed salad from China, distributed internationally	14-Aug-2019	57	European Region, Western Pacific Region	Austria, China, Denmark, Germany, Greece, Italy, Portugal, Romania, Spain, United Kingdom, New Zealand, Norway, Slovakia	Biological	Norovirus	Vegetables and vegetable products	Wakame seaweed salad
Outbreak of listeriosis in Spain linked to the consumption of domestically produced chilled roast pork	20-Aug-2019	13	European Region	Spain	Biological	<i>Listeria monocytogenes</i>	Meat and meat products	Chilled pork roast
Outbreak of Cyclospora infections in the USA linked to the consumption of fresh basil from Mexico	20-Aug-2019	8	European Region	Spain, Region of the Americas Mexico, United States of America	Biological	<i>Cyclospora</i> sp.	Herbs, spices and condiments	Fresh Basil
Detection in the United Kingdom of foreign matter in dumplings from Thailand	29-Aug-2019	9	European Region, South-East Asian Region	France, Thailand, United Kingdom	Physical	Metal	Snacks, desserts, and other foods	Chicken and vegetable dumplings
Recall in Australia of salt and pepper grinders due to potential presence of plastic fragments	6-Sept-2019	1	Western Pacific Region	Australia, China, Fiji, Papua New Guinea, Philippines, Solomon Islands	Physical	Plastic	Herbs, spices and condiments	Salt and pepper grinders
Recall in the USA of spice blends from the UAE due to the detection of <i>Salmonella</i>	11-Sept-2019	11	Eastern Mediterranean Region, Region of the Americas	United Arab Emirates, United States of America	Biological	<i>Salmonella</i> sp.	Herbs, spices and condiments	Spice blend
Outbreak of Hepatitis A virus infections in the Republic of Korea linked to the consumption of salted clams	12-Sept-2019	24	Western Pacific Region	Australia, Republic of Korea	Biological	Hepatitis A	Fish and other seafood	Salted clams
Recall in Germany of roasted onions manufactured in the Netherlands due to the presence of metal pieces	13-Sept-2019	6	European Region, Region of the Americas	Austria, Belgium, Canada, Czech Republic (the), Denmark, Germany, Netherlands, Poland, Portugal, Slovakia, Spain, United Kingdom, United States of America	Physical	Metal	Vegetables and vegetable products	Roasted onions
Recalls in European countries of canned pineapple pieces from China due to the presence of metal wires	29-Sept-2019	4	European Region, Western Pacific Region	Belgium, China, France, Ireland, Netherlands, Poland, United Kingdom	Physical	Metal	Fruit and fruit products	Canned pineapple

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Recall in Canada of brand beef products due to possible contamination with <i>E.coli</i> O157:H7	2-Oct-2019	1	Eastern Mediterranean Region, Region of the Americas	Canada, Saudi Arabia, United Arab Emirates	Biological	<i>E.coli</i> O157:H7	Meat and meat products	Beef products
Recall in Chile of powdered food products due to contamination with plastic fragments	3-Oct-2019	4	Region of the Americas	Region of the Americas, Peru	Bolivia, Chile	Plastic	Composite food	Powdered food
Recall in Australia of sparkling wine due to glass breakages	23-Oct-2019	1	Western Pacific Region	Australia, New Zealand	Physical	Glass	Alcoholic beverages	Sparkling wine
Recall in Germany of frozen raspberries from China due to detection of Norovirus, distributed internationally	11-Nov-2019	14	African Region, Eastern Mediterranean Region, European Region, Region of the Americas, South-East Asian Region, Western Pacific Region	Bermuda (United Kingdom), China, Gambia, Germany, Ghana, Iraq, Italy, Maldives, Malta, Netherlands, Nigeria, Somalia, Republic of Korea, Switzerland, United States of America	Biological	Norovirus	Fruit and fruit products	Frozen raspberries
Recall in the United Kingdom of tahini products manufactured in Mexico due to the detection of <i>Salmonella</i> , distributed internationally	11-Nov-2019	14	European Region, Region of the Americas	Mexico, United Kingdom	Biological	<i>Salmonella</i> sp.	Herbs, spices and condiments	Tahini
Detection in Poland of <i>Salmonella</i> in ground black pepper exported from Viet Nam distributed internationally	11-Nov-2019	2	European Region, Western Pacific Region	Poland, Viet Nam	Biological	<i>Salmonella</i> sp.	Herbs, spices and condiments	Black pepper
Recall in Austria of almonds from the United States of America due to the detection of <i>Salmonella</i> , distributed internationally	11-Nov-2019	2	European Region, Region of the Americas	Austria, Germany, Hungary, Slovenia, Switzerland, United States of America	Biological	<i>Salmonella</i> sp.	Nuts and oilseeds	Almonds
Suspected cases of Norovirus GII in Spain linked to the consumption of frozen wedge clams from Turkey	12-Nov-2019	14	European Region	Andorra, France, Italy, Luxembourg, Portugal, Spain, Turkey	Biological	Norovirus GII	Fish and other seafood	Wedge clams

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Possible outbreak of Botulism in Qatar	15-Nov-2019	12	Eastern Mediterranean Region	Qatar	Biological	<i>Clostridium botulinum</i>	Unknown	Unknown
Detection of <i>Listeria monocytogenes</i> in pork cured loin from Spain, distributed internationally	26-Nov-2019	2	Eastern Mediterranean Region, European Region, Region of the Americas, Western Pacific Region	France, Germany, Italy, Japan, Lebanon, Luxembourg, Mexico, Spain	Biological	<i>Listeria monocytogenes</i>	Meat and meat products	Pork cured loin
Outbreak of <i>E. coli</i> infections in the United States of America linked to the consumption of romaine lettuce	26-Nov-2019	3	Region of the Americas Western Pacific Region	China, Hong Kong SAR (China), United States of America	Biological	<i>Escherichia coli</i> O157:H7	Vegetables and vegetable products	Romaine lettuce
Recall in Canada of mozzarella cheese from Italy due to detection of <i>Listeria monocytogenes</i>	29-Nov-2019	1	European Region, Region of the Americas	Canada, Italy	Biological	<i>Listeria monocytogenes</i>	Milk and dairy products	Mozzarella cheese
Recall in Canada of pancetta meat from Italy due to detection of <i>Listeria monocytogenes</i>	4-Dec-2019	15	European Region, Region of the Americas	Canada, Italy	Biological	<i>Listeria monocytogenes</i>	Meat and meat products	Pancetta
Recall in Canada of cheese from Italy due to elevated levels of <i>E. coli</i>	16-Dec-2019	2	European Region, Region of the Americas	Canada, Italy	Biological	<i>Escherichia coli</i>	Milk and dairy products	Sheep milk cheese
Detection of <i>Listeria monocytogenes</i> in chilled smoked salmon from France, distributed internationally	20-Dec-2019	4	African Region, Eastern Mediterranean Region, European Region	Belgium, Côte d'Ivoire, France, Germany, Mauritius, Monaco, Seychelles, Switzerland, Togo, United Arab Emirates	Biological	<i>Listeria monocytogenes</i>	Fish and other seafood	Smoked salmon

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