



Food and Agriculture  
Organization of the  
United Nations



World Health  
Organization

# INFOSAN ACTIVITY REPORT

# 2016 | 2017



INTERNATIONAL  
FOOD SAFETY  
AUTHORITIES  
NETWORK





Food and Agriculture  
Organization of the  
United Nations



World Health  
Organization

# ACTIVITY REPORT

## 2016|2017



**INFOSAN**  
INTERNATIONAL FOOD SAFETY AUTHORITIES NETWORK

INFOSAN activity report 2016/2017

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# Foreword

An increasingly interconnected global food supply means that risks posed by unsafe food have the potential to rapidly evolve from a local problem to an international emergency. Ensuring food safety is therefore an important component to consider in the broader context of achieving global health security.

While international food trade brings many benefits to consumers and contributes significantly to economic development, new challenges are constantly presented to food safety authorities around the world. Recent experiences, including the large and protracted outbreak of listeriosis in South Africa, have demonstrated that with the increased volume of food products traded globally, comes an increased risk of the spread of foodborne pathogens and contaminants across national borders. This necessitates more efficient information sharing among national food safety authorities from different countries.

Since 2004, the International Food Safety Authorities Network (INFOSAN) has facilitated the rapid exchange of information across borders and between members, during hundreds of food safety events.

As a member-driven, global network, INFOSAN has proven to be a practical, effective and efficient tool for information exchange, allowing for the implementation of risk management measures to prevent foodborne illness and save lives.

When faced with an urgent food safety issue, the ability to draw on the experiences of others is a major asset; members are encouraged to utilize the INFOSAN Community Website to connect with each other directly.

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. Efforts to improve food safety should therefore be strengthened through public health and development policies, especially as we look towards achieving the Sustainable Development Goals. Together, we must work to scale up and mainstream food safety in national and international political agendas.

Commitment to active participation in INFOSAN is one important way in which national government agencies can demonstrate their dedication to improving food safety around the world.

All INFOSAN Members are encouraged to actively participate in INFOSAN by:

- Reporting urgent food safety events of potential international significance to the INFOSAN Secretariat;
- Responding to information requests from the INFOSAN Secretariat during the verification and assessment of events by providing all necessary information;
- Requesting international assistance through the INFOSAN Secretariat to respond to food safety events as necessary;
- Taking action on INFOSAN Alerts and disseminate information accordingly;
- Collaborating with their respective National IHR Focal Point on food safety events; and
- Sharing experiences and best practices related to food safety emergency management, so that all members can learn from one another.



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## Abbreviations

AMRO	WHO Regional Office for the Americas
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
ASTF	Africa Solidarity Trust Fund
AU	African Union
AUFSMCM	African Union Food Safety Management Coordination Mechanism
BAFRA	The Royal Government of Bhutan, Ministry of Agriculture and Food Regulatory Authority
BFSA	Bangladesh Food Safety Authority
CAC	Codex Alimentarius Commission
CFIA	Canadian Food Inspection Agency
CIFSQ	China International Food Safety and Quality
CIFST	Canadian Institute of Food Science and Technology
CPLP	Community of Portuguese Language Countries
DFTQC	Department of Food Technology and Quality Control
ECDC	European Centre for Disease Prevention and Control
EFSA	European Food Safety Authority
EHEC	Enterohemorrhagic <i>Escherichia coli</i>
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 of Food Protection
ICW	INFOSAN Community Website
IHR (2005)	International Health Regulations (2005)
INFOSAN	International Food Safety Authorities Network
IUFoST	International Union of Food Science and Technology
JEE	Joint External Evaluation

MOHFW	Ministry of Health and Family Welfare
NCC	National Codex Committee
NGS	Next-Generation Sequencing
NTU	Nanyang Technological University
NUS	National University of Singapore
OIE	World Organisation for Animal Health
RASFF ECCP	European Commission Contact Point
RASFF	Rapid Alert System for Food and Feed
SADC	Southern African Development Community
SAR	Special Administrative Region
SEARO	WHO Regional Office for South-East Asia
United Kingdom	United Kingdom of Great Britain and Northern Ireland
US FDA	United States Food and Drug Administration
USA	United States of America (the)
WHO	World Health Organization
WPRO	WHO Regional Office for the Western Pacific



# Executive Summary

## INFOSAN in 2016 and 2017

### Highlights from 2016 and 2017

- INFOSAN was active during 84 global food safety events, involving countries and territories across all regions.
- National capacities for food safety emergency management strengthened through a series of webinars and simulation exercises in multiple languages.
- Strategic partnerships forged with several international networks and initiatives.
- Active membership increased, especially through targeted efforts in Africa and the Americas.
- Global visibility of INFOSAN increased as illustrated through references to INFOSAN in news, social media and scientific literature.

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.

During the 2016/2017 biennium, the INFOSAN Secretariat responded to 84 international food safety events, facilitating communication and 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 fish and other seafood, followed by meat and meat products and vegetables and vegetable products. The average time the INFOSAN Secretariat remained actively engaged with an event was 28 days (compared to 22 days during the previous biennium). The majority of the 84 events involved Member States in the Region of the Americas, followed by the European Region, the Western

Pacific Region, the African Region, the South-East Asia Region, and the Eastern Mediterranean Region, respectively.

To strengthen national capacities, the INFOSAN Secretariat supported efforts in Bangladesh, Bhutan, Mexico and Nepal 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 Africa were sustained; these included four successful simulation exercises in English, French and Spanish as well as the third and fourth regional meetings of INFOSAN members in Costa Rica and in the USA respectively and a sub-regional workshop for INFOSAN members from the Southern African Development Community (SADC) in South Africa. The INFOSAN Secretariat also co-sponsored an international conference on regional perspectives of food science developments in Asia. The overarching goal of this meeting was to add to the experience of INFOSAN members in the region by enabling an environment for information sharing on emerging technologies and methodologies that may be unfamiliar or under-utilized.

During the biennium, one 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), the Asia-Pacific Economic Cooperation (APEC) and the African Union Food Safety Management Coordination Mechanism (AUFSMCM). Leveraging existing tools and momentum to amplify the work of INFOSAN through functional links to other programmes and networks has proven mutually beneficial for achieving common goals in the face of limited financial and human resources.

Membership has continued to grow; 82% of all WHO Member States have an active INFOSAN Emergency Contact Point, an increase of 13 percentage points during the biennium. The largest gains have been observed in Africa and the Americas as a result of targeted efforts in those regions. To support new members the INFOSAN Secretariat continued to offer training opportunities, including the use of webinars conducted in English, French and Spanish, 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. It now supports more than 500 users around the globe and the user interface has been translated into French and Spanish to facilitate the participation of members who are more comfortable making contributions in those languages. Compared to previous years, there was a marked increase in the utilization of the discussion forum; members asked questions and shared information, particularly on food safety events of international concern.

As observed in past years, several food safety events captured headlines around the globe in 2016 and 2017, 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. Increasingly, '#INFOSAN' is being used by members on social media to refer to Network activities, including during emergencies, increasing the visibility of the Network.

In order 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 food safety emergencies. As such, the INFOSAN Secretariat will conduct an in-depth study of members' experiences regarding their participation in Network activities. This comprehensive analysis 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.

Encouraging the active participation of INFOSAN members continues to be a top priority. During the 2018/2019 biennium, FAO and WHO will implement an INFOSAN workplan that will 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 and with support from a new INFOSAN Strategic Framework.

## 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.

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 84 during the 2016/2017 biennium.

This INFOSAN Activity Report provides an overview of the major events, activities and information products relating to INFOSAN in 2016/2017. The report highlights some achievements from the biennium, as well as challenges to overcome and areas for improvement. INFOSAN should be a member-driven network; a united and sustained effort must be made by all INFOSAN members for INFOSAN to reach its full potential.

<sup>1</sup> Further reading: [http://www.who.int/foodsafety/areas\\_work/foodborne-diseases/ferg/en/](http://www.who.int/foodsafety/areas_work/foodborne-diseases/ferg/en/)

*“ With an increasingly globalized food chain, INFOSAN plays the important role of connecting New Zealand with INFOSAN colleagues around the world, allowing us to manage food safety events of a global nature in a rapid and effective manner. INFOSAN also helps to ensure proportionate and effective actions in response to international food safety events through the provision of important information, assistance and guidance ”*



Ms Jenny Bishop  
Ministry for Primary Industries  
INFOSAN Emergency Contact Point,  
NEW ZEALAND

# INFOSAN Activities

## EMERGENCY ACTIVITIES

INFOSAN has been operational during 84 food safety events during the 2016/2017 biennium. The level of engagement by the INFOSAN Secretariat in each event varies depending on a number of 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 Alert will also be posted and the entire membership will be notified.

## INFOSAN EMERGENCY INVOLVEMENT IN 2016/2017

Overall, the INFOSAN Secretariat was involved in 84 events during the 2016/2017 biennium (see Appendices A and B). The average time that the INFOSAN Secretariat remained actively engaged with an event was 28 days, with a minimum of one day and a maximum of 169 days (median = 18 days). There were 58 events involving a biological hazard, 12 involving a chemical hazard, seven involving an unspecified hazard, four involving a physical hazard, and three involving an undeclared allergen.

For events involving a biological hazard, *Salmonella* spp. was most commonly responsible (21 events in 2016/2017). These were followed by *Clostridium* spp. (9), *Listeria monocytogenes* (7), *Escherichia coli* (6), Hepatitis A virus (4), Norovirus (3), *Bacillus* spp. (2), *Campylobacter* (2), *Anisakis* (1), *Brucella* spp. (1), *Cronobacter sakazakii* (1), *Cyclospora cayetanensis* (1), *Vibrio* spp. (1) and an unspecified biological hazard (1). With regards to chemical hazards, events involving excess amounts of heavy metals occurred most frequently (3), followed by Aflatoxin (2). Other chemical hazards responsible for food safety events were Fipronil (1), Histamine (1), Methanol (1), Oxyphenylbutazone (1), Paralytic shellfish toxin (1), Phosphate (1), and an unspecified hazard (1).

“ INFOSAN is unique in providing a global perspective to food safety investigations, and is also a useful medium for exchange of information and best practice on food safety matters ”



Mrs Drazenka Tubin-Delic  
Head of Investigations  
Food Standards Agency  
INFOSAN Emergency Contact Point,  
United Kingdom

The food categories most commonly involved in the 84 events in 2016/2017 were fish and other seafood (20), meat and meat products (7), vegetables and vegetable products (7), and milk and dairy products (6).

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 84 events in 2016/2017 involved Member States in the Region of the Americas (42), followed by the European Region (41), the Western Pacific Region (33), the African Region (12), the South-East Asia Region (10), and the Eastern Mediterranean Region (7), respectively.

Most event notifications in 2016/2017 were reported to the INFOSAN Secretariat by WHO headquarters event-based surveillance (26), followed by an INFOSAN Emergency Contact Point or Focal Point (22). Other notifications were made by WHO staff from the Regional Office for Europe (EURO) (15), WHO staff from the Regional Office for the Americas (AMRO) (11), RASFF European Commission Contact Point (RASFF ECCP) (6), the European Centre for Disease Prevention and Control (ECDC) (2), WHO staff from the Regional Office for Africa (AFRO) (1), and, finally, WHO staff from the WHO Regional Office for the Western Pacific (WPRO) (1).

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 2016/2017.

**TABLE 1**  
FOOD SAFETY EVENTS BY REGION\*, 2013-2017

REGION	2017 N = 44 EVENTS n (%)	2016 N = 40 EVENTS n (%)	2015 N = 37 EVENTS n (%)	2014 N = 40 EVENTS n (%)	2013 N = 44 EVENTS n (%)
African Region	9 (20%)	3 (7%)	5 (14%)	4 (10%)	-
Region of the Americas	26 (59%)	16 (40%)	17 (46%)	16 (40%)	17 (39%)
Eastern Mediterranean Region	6 (14%)	1 (2%)	7 (19%)	3 (8%)	6 (14%)
European Region	19 (43%)	22 (55%)	18 (49%)	25 (63%)	30 (68%)
South-East Asia Region	5 (11%)	5 (12%)	7 (19%)	4 (10%)	5 (11%)
Western Pacific Region	21 (48%)	12 (30%)	15 (41%)	22 (55%)	16 (36%)

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

**TABLE 2**  
FOOD SAFETY EVENTS BY FOOD CATEGORY, 2013-2017

FOOD CATEGORY	2017 N = 44 EVENTS n (%)	2016 N = 40 EVENTS n (%)	2015 N = 37 EVENTS n (%)	2014 N = 40 EVENTS n (%)	2013 N = 44 EVENTS n (%)
Alcoholic beverages	1 (2%)	1 (2%)	1 (3%)	-	1 (2%)
Animal feed	-	-	-	-	-
Cereals and cereal-based Products	2 (4%)	3 (7%)	2 (5%)	1 (3%)	2* (5%)
Composite food	-	-	2 (5%)	2 (5%)	-
Eggs and egg products	2 (4%)	1 (2%)	-	2 (5%)	-
Fats and oils of animal and vegetable origin	-	-	2 (5%)	1 (3%)	-
Fish and other seafood	11 (25%)	9 (23%)	7 (19%)	4 (10%)	5 (11%)
Food additive	-	-	-	2 (5%)	-
Foods for infants and small Children	3 (7%)	-	-	2 (5%)	-
Fruit and fruit products	3 (7%)	2 (5%)	5 (14%)	2 (5%)	3 (7%)
Herbs, spices and Condiments	2 (4%)	2 (5%)	2 (5%)	1 (3%)	2 (5%)
Legumes and pulses	3 (7%)	3 (8%)	-	-	-
Meat and meat products	4 (9%)	3 (8%)	5 (14%)	8 (20%)	5 (11%)
Milk and dairy products	3 (7%)	3 (8%)	1 (3%)	3 (8%)	7 (16%)
Non-alcoholic beverages	1 (2%)	-	1 (3%)	-	1 (2%)
Nuts and oilseeds	2 (4%)	2 (5%)	-	2 (5%)	5 (11%)
Products for special nutritional use	2 (4%)	1 (2%)	-	1 (3%)	3 (7%)
Snacks, desserts and other foods	3 (7%)	-	1 (3%)	3 (8%)	1 (2%)
Sugar and confectionary	-	2 (5%)	1 (3%)	1 (3%)	1 (2%)
Unknown	-	3 (8%)	4 (11%)	2 (5%)	3 (7%)
Vegetables and vegetable Products	2 (4%)	5 (12%)	3 (8%)	3 (8%)	6* (14%)

\* 1 event involved both vegetables and vegetable products and cereals and cereal-based products in 2013.

**TABLE 3**  
FOOD SAFETY EVENTS BY HAZARD CATEGORY, 2013-2017

HAZARD	2017 N = 44 EVENTS n (%)	2016 N = 40 EVENTS n (%)	2015 N = 37 EVENTS n (%)	2014 N = 40 EVENTS n (%)	2013 N = 44 EVENTS n (%)
Biological	28 (64%)	30 (75%)	22 (59%)	26 (65%)	28 (64%)
Chemical	7 (16%)	5 (12%)	8 (22%)	10 (25%)	15 (34%)
Physical	1 (2%)	3 (8%)	3 (8%)	1 (3%)	-
Undeclared allergen	3 (7%)	-	3 (8%)	2 (5%)	-
Unknown	5 (11%)	2 (5%)	1 (3%)	1 (3%)	1 (2%)

**TABLE 4**  
FOOD SAFETY EVENTS INVOLVING BIOLOGICAL HAZARDS, 2013-2017

BIOLOGICAL HAZARD	2017 N = 28 EVENTS n (%)	2016 N = 30 EVENTS n (%)	2015 N = 22 EVENTS n (%)	2014 N = 26 EVENTS n (%)	2013 N = 28 EVENTS n (%)
<i>Anisakis</i>	1 (4%)	-	-	-	-
<i>Bacillus</i> spp.	-	2 (7%)	1 (5%)	2 (8%)	-
<i>Brucella</i> spp.	-	1 (3%)	-	-	-
<i>Campylobacter</i>	-	2* (7%)	-	-	-
<i>Clostridium</i> spp.	4 (14%)	5 (17%)	4 (18%)	2 (8%)	4 (14%)
<i>Cronobacter sakazakii</i>	1 (4%)	-	-	-	-
<i>Cyclospora cayetanensis</i>	-	1 (3%)	2 (9%)	-	-
<i>Datura stramonium</i>	-	-	-	-	1 (4%)
Dead lizard	-	-	-	1 (4%)	-
<i>Escherichia coli</i>	4 (14%)	2 (7%)	1 (5%)	4 (15%)	3 (11%)
Hepatitis A virus	1 (4%)	3 (10%)	2 (9%)	1 (4%)	4 (14%)
Influenza A virus (H7N9)	-	-	-	-	1 (4%)
<i>Listeria monocytogenes</i>	5 (17%)	2 (7%)	3 (14%)	5 (19%)	5 (18%)
Norovirus	1 (4%)	2* (7%)	3 (14%)	1 (4%)	1 (4%)
<i>Rhizopus oryzae</i>	-	-	-	1 (4%)	-
<i>Salmonella enterica</i> spp.	11 (39%)	10* (30%)	4 (18%)	6 (23%)	7 (25%)
Schmallenberg virus	-	-	-	-	1 (4%)
<i>Shigella</i> spp.	-	-	1 (5%)	-	-
<i>Staphylococcus aureus</i>	-	-	-	-	1 (4%)
<i>Trichinella</i>	-	-	-	1 (4%)	-
Unknown	-	1 (3%)	1 (5%)	-	-
<i>Vibrio</i> spp.	-	1 (3%)	-	1 (4%)	-
<i>Yersinia pseudotuberculosis</i>	-	-	-	1 (4%)	-

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

“ For a long time the organization of food safety in my country has demonstrated a lack of coordination. Since the designation of the INFOSAN Focal Points and Emergency Contact Point in my country, we are witnessing the birth of cohesion between the different administrative structures responsible for national food safety ”



**Mr Karim Koudougou**  
Chargé de la fortification et de la  
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Direction de la nutrition  
INFOSAN Emergency Contact Point,  
BURKINA FASO



**TABLE 5**  
FOOD SAFETY EVENTS INVOLVING CHEMICAL HAZARDS, 2013-2017

CHEMICAL HAZARD	2017 N = 7 EVENTS n (%)	2016 N = 5 EVENTS n (%)	2015 N = 8 EVENTS n (%)	2014 N = 10 EVENTS n (%)	2013 N = 15 EVENTS n (%)
Aflatoxin	1 (14%)	1 (20%)	-	-	2 (13%)
Atropine	-	-	-	-	2** (13%)
Chloramphenicol	-	-	-	-	1 (7%)
Cocaine	-	-	-	-	1 (7%)
Deoxynivalenol (DON)	-	-	1 (13%)	-	-
Dicyandiamide	-	-	-	-	1 (7%)
Dimethyl yellow	-	-	-	1 (10%)	-
Fipronil	1 (14%)	-	-	-	-
Formalin	-	-	-	-	1 (7%)
Heavy metals	-	-	1* (13%)	2 (20%)	-
Histamine	-	1 (20%)	1 (13%)	-	-
Hydrogen cyanide	-	-	-	1 (10%)	-
Hydrogenated oils	-	-	1 (13%)	-	-
Iodine	-	-	-	1 (10%)	-
Lead	-	1 (20%)	-	-	-
Mercury	1 (14%)	1 (20%)	-	-	-
Methanol	-	1 (20%)	1 (13%)	-	1 (7%)
Monosodium glutamate	-	-	1* (13%)	-	-
Nitrates	-	-	-	-	1 (7%)
Organophosphate	-	-	-	-	1 (7%)
Oxedrine	-	-	-	1 (10%)	-
Oxyphenylbutazone	1 (14%)	-	-	-	-
Paralytic shellfish toxin	1 (14%)	-	1 (13%)	-	-
Pesticide residues	-	-	-	2 (20%)	-
Phosphate	1 (14%)	-	-	-	-
Phenylbutazone	-	-	-	-	1 (7%)
Phthalates/polycyclic aromatic hydrocarbons	-	-	1 (13%)	-	-
Plastic	-	-	1 (13%)	-	-
Rat poison	-	-	-	-	1 (7%)
Scopolamine	-	-	-	-	1** (7%)
Unknown	1 (14%)	-	-	1 (10%)	2 (13%)
Waste oil	-	-	-	1 (10%)	-

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

\*\* 1 event involved both atropine and scopolamine in 2013

TABLE 6

FOOD SAFETY EVENTS INVOLVING PHYSICAL HAZARDS, 2013-2017

PHYSICAL HAZARD	2017 N = 1 EVENT n (%)	2016 N = 3 EVENTS n (%)	2015 N = 3 EVENTS n (%)	2014 N = 1 EVENT n (%)	2013 N = 0 EVENTS n (%)
Glass	1 (100%)	-	2 (67%)	-	-
Packaging material	-	1 (33%)	-	-	-
Plastic	-	1 (33%)	-	-	-
Metal	-	1 (33%)	1 (33%)	1 (100%)	-

TABLE 7

FOOD SAFETY EVENTS INVOLVING UNDECLARED ALLERGENS, 2013-2017

UNDECLARED ALLERGEN	2017 N = 3 EVENTS n (%)	2016 N = 0 EVENTS n (%)	2015 N = 3 EVENTS n (%)	2014 N = 2 EVENTS n (%)	2013 N = 0 EVENTS n (%)
Almond	-	-	2* (67%)	-	-
Egg	2 (67%)	-	-	1** (50%)	-
Milk	-	-	1 (33%)	-	-
Peanut	1 (33%)	-	2* (67%)	2** (100%)	-
Sesame	-	-	-	1** (50%)	-

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

\*\* 1 event involved undeclared egg, peanut and sesame in 2014

*“ The use of the INFOSAN platform to communicate food safety risks to human health helps to guarantee safer food all over the world and a fast response in case of a food emergency crisis ”*



Dr Cristina Maria Batista Rodrigues  
Direção-General de Alimentação e Veterinária  
INFOSAN Emergency Contact Point,  
PORTUGAL



Ms Constanza Vergara, Mr. Diego José Varela  
& Mr Juan Ortúzar  
Food Risk Assessment Officers  
Agencia Chilena para la Calidad e Inocuidad  
Alimentaria INFOSAN Focal Points,  
CHILE

*“ In a world where immediate information is at reach, it is important to have a network such as INFOSAN that easily connects us with trustworthy information and the officials responsible for food safety in the different countries. For us, INFOSAN is a tool that informs us about the different experiences of other nations in handling food safety events and makes us more effective in handling events when Chilean food products are involved ”*

**TABLE 8**  
SOURCE OF NOTIFICATION OF INFOSAN EVENTS, 2013-2017

SOURCE OF NOTIFICATION	2017 N = 44 EVENTS n (%)	2016 N = 40 EVENTS n (%)	2015 N = 37 EVENTS n (%)	2014 N = 40 EVENTS n (%)	2013 N = 44 EVENTS n (%)
European Centre for Disease Prevention and Control (ECDC)	2 (5%)	-	2 (5%)	2 (5%)	2 (5%)
European Commission's RASFF Contact Point (RASFF ECCP)	6 (14%)	-	3 (8%)	6 (15%)	4 (9%)
INFOSAN Emergency Contact Point or Focal Point	12 (27%)	10 (25%)	14 (38%)	9 (23%)	8 (18%)
WHO headquarters event-based surveillance*	11 (25%)	15 (37%)	8 (22%)	6 (15%)	11 (25%)
WHO Regional Office for Africa (AFRO)	1 (2%)	-	-	-	-
WHO Regional Office for the Americas (AMRO)	7 (16%)	4 (10%)	5 (14%)	6 (15%)	4 (9%)
WHO Regional Office for Europe (EURO)	5 (11%)	10 (25%)	5 (14%)	8 (20%)	15 (34%)
WHO Regional Office for the Western Pacific (WPRO)	-	1 (3%)	-	3 (8%)	-

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

## EVENTS IN FOCUS

### **Outbreak of salmonellosis (serotype Anatum) in Australia linked to internationally distributed pre-packed lettuce**

In February 2016, pre-packaged lettuce contaminated with *Salmonella* Anatum caused an outbreak of at least 28 cases of salmonellosis in Australia. The details of the investigation provided to the INFOSAN Secretariat by the INFOSAN Emergency Contact Point in Australia indicated that the implicated products had also been exported to four additional countries. INFOSAN Emergency Contact Points in the respective importing countries were alerted and the INFOSAN Emergency Contact Point in Australia also posted the information directly on the INFOSAN Community Website in the discussion forum. Throughout the event, Australian authorities kept INFOSAN updated concerning the list of importing countries, and the product lots that were affected, thereby allowing INFOSAN to effectively share up-to-date information with the affected importing countries. This allowed those countries who received the implicated products to undertake quick and effective risk management measures in response to the information that they were provided and the risks that they faced. INFOSAN members from several countries shared their respective risk management actions on the discussion forum of the INFOSAN Community Website which helped to summarize the various international dimensions of this event.

### **Reports of fake rice being seized by customs inspectors in different countries**

As in previous years, fake rice continued to make headlines in 2016 and 2017. In November 2016, it was reported in the media that 5000 bags of artificial rice were seized in Singapore after being imported from India. The INFOSAN Emergency Contact Point in Singapore confirmed that the rice was not actually artificial, but rather the branding was counterfeit. While this issue of food fraud did not pose a food safety concern, it highlighted the significance of responsible news reporting and the importance of independent verification by INFOSAN members in national competent authorities, of information that can have far reaching effects upon international trade.

In December 2016, it was reported in the media that 2.5 tonnes of plastic rice was seized in Nigeria by customs officials. The INFOSAN Emergency Contact Point in Nigeria subsequently indicated to the INFOSAN Secretariat that the test results showed that the implicated rice was not found to be made of plastic, nor artificial. However, final investigations in Nigeria indicated that the product was not fit for consumption due to detection high levels of coliform and was billed for destruction.

In January 2017, rumors began circulating in online forums about “fake rice” in Vancouver, Canada. As a result, the INFOSAN Emergency Contact Point in Canada indicated that there were over 30 complaints for plastic in rice. However, the CFIA sampled and tested rice associated with complaints and did not find any issue. To date, no instances of ‘fake’ or ‘plastic’ rice have been substantiated by INFOSAN Members and reported to the INFOSAN Secretariat. Together, these events highlight an ongoing issue related to rumors spread through social media, and media integrity and accuracy in reporting, since false or misleading reports can be perpetuated and result in heightened concerns over the safety of the food supply. The INFOSAN Secretariat will continue to follow-up with INFOSAN members in countries where media reports make claims about fake rice. While INFOSAN has been a useful medium through which to engage directly with national government authorities to obtain validated information to share with concerned members from other countries, national authorities need to be prepared to act on validated information in order to dispel myths and alleviate consumer concerns.

### **Eggs, egg products and poultry products from several countries contaminated with fipronil and distributed internationally**

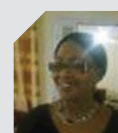
In August 2017, several European countries reported the contamination of eggs with the pesticide fipronil. As a result, millions of eggs were subject to recall. As investigations continued, an increasingly large range of eggs, egg-containing products and poultry were discovered to be contaminated with fipronil. Information provided through the Rapid Alert System for Food and Feed (RASFF) by national authorities in Europe, indicated that several countries outside of Europe received contaminated eggs, egg-containing products or poultry. These countries included Hong Kong SAR (China), Lebanon, Liberia, Qatar, Russian Federation, Saudi Arabia and South Africa. INFOSAN members in these countries were informed by the INFOSAN Secretariat and were invited to provide details on their national response efforts on the INFOSAN Community Website. In addition, authorities in the Republic of Korea reported that eggs from numerous farms in the Republic of Korea tested positive for fipronil contamination. Similarly, authorities in Taiwan, China announced the discovery of domestically contaminated eggs from a number of local egg producers following the control and sampling of all egg producing farms in Taiwan, China. These findings indicated that the practice of treating poultry and the poultry environment

with disinfectants containing fipronil may not be limited to a few farms Europe. Health risk assessments performed in several European countries and by WHO concluded that there was no acute public health risk. In spite of these conclusions, this event highlighted an important global issue of poor-practice at the farm-level. This event also highlighted the truly global nature of food trade and distribution and the utility of INFOSAN to provide members with timely and accurate information, direct from national government authorities. This proved particularly important during this event for which there was a high level of media attention.

### **Outbreak of salmonellosis among infants linked to infant formula from France that was distributed internationally**

When an outbreak of salmonellosis infections among infants was identified in France in December 2017, French authorities were able to link cases to the consumption of certain infant formula products, produced by a single manufacturer in France and contaminated with *Salmonella* Agona. Recalls of the implicated infant formula products as well as all other products produced by this manufacturer since February 2017 were subsequently issued and overseen by French authorities. Recalled products were exported to over 80 countries and territories. The INFOSAN Emergency Contact Point in France rapidly shared the distribution details of the affected products with the INFOSAN Secretariat, thereby enabling the INFOSAN Secretariat to immediately notify the INFOSAN Emergency Contact Points in the importing countries. This efficient sharing of the details of recalled products allowed importing countries to stop their subsequent distribution, and implement appropriate risk management measures to prevent additional cases of illness. Multiple INFOSAN Emergency Contact Points notified WHO of various measures that were swiftly taken, including the withdrawal of the products from markets and the issuance of public health advice to consumers. The INFOSAN Secretariat worked closely with INFOSAN Emergency Contact Points around the world, monitoring the international distribution of implicated infant formula and providing assistance to affected countries, as required. The INFOSAN Secretariat advises all consumers to follow the FAO/WHO guidelines for the safe preparation, storage and use of powdered formula which includes easy-to follow, step-by-step recommendations.

*“ INFOSAN is an effective warning tool through the rapid exchange of information in the event of emergencies. The information that is provided makes it possible to take appropriate preventive and crisis management measures in a timely manner and thus limit the risks of propagation of the hazards. In Senegal, the designation of INFOSAN points has contributed to the strengthening of the collaboration between the competent authorities ”*



**Ms Mame Diarra Faye Leye**  
Responsable Cellule  
Centre Antipoison/ministre de la  
Santé et de l'Action sociale  
INFOSAN Emergency Contact Point,  
SENEGAL

## BOX 1

## COUNTRY SHOWCASE

**Canada and Australia demonstrate leadership with proactive notifications of international food safety events**

**CANADA:** In June 2016, Canada initiated the direct notification of food recalls to INFOSAN members when the food being recalled in Canada is known to have entered international trade. Since the implementation of this new practice, 109 notifications have been made to INFOSAN members via the INFOSAN Emergency Contact Points, either because the country in question had received the recalled food or was the country where the food originated. Overall, direct notification to INFOSAN members is seen to be beneficial as it ensures food safety authorities are aware of food safety concerns, and can take appropriate action as needed. Feedback received from INFOSAN members has been positive on the whole. The direct notification enables questions to be raised directly with Canada, thus promoting a better understanding of respective food safety systems and providing an opportunity to develop working relationships.

**AUSTRALIA:** Australia has implemented a similar procedure to send direct notifications to INFOSAN Emergency Contacts Points for all food recalls when the affected product either originated from another country or was exported from Australia. Since the process was implemented in November 2016, 42 direct notifications have been sent (including initial notifications and follow-up notifications as further information has become available). Of these, 29 notifications related to the recall of products exported from Australia and 13 related to the recall of products imported into Australia from other countries. The process has allowed for efficient exchange of food recall information and the feedback received from other INFOSAN members has been positive. Making these connections helps build relationships and trust – important elements of an effective response system.

If all countries adopted such practices as those implemented by INFOSAN members in Canada and Australia, communication within INFOSAN would be greatly accelerated, allowing members to more swiftly implement risk management measures and prevent foodborne illness around the world.

*“ INFOSAN is a great and essential tool for all Member States and especially important to those countries who are importing/exporting higher percentages of food items. INFOSAN is not only assisting in control & prevention of possible foodborne disease outbreaks but also reducing the burden of disease due to contaminated food ”*



**Dr Tomader Kurdi**  
Director of Food and Chemical Safety Program,  
Ministry of Health,  
INFOSAN Emergency Contact Point,  
SAUDI ARABIA

## CAPACITY BUILDING ACTIVITIES

### NATIONAL CAPACITY BUILDING WORKSHOPS

#### **Bhutan – Advocacy Meeting on Codex and INFOSAN networking, 19-20 September 2016, Paro, Bhutan**

The Royal Government of Bhutan, Ministry of Agriculture and Food Regulatory Authority (BAFRA) organized an advocacy meeting on Codex and INFOSAN in Paro, Bhutan from 19-20 September 2016. The meeting was attended by 20-30 participants from multiple sectors covering food safety (including the INFOSAN Emergency Contact Point), human health (including the National IHR Focal Point), animal health (including the OIE delegate for food safety), trade, standards and the Gross National Happiness Commission. Sessions covered the structure and function of the Codex Alimentarius Commission (CAC), strategies for strengthening the National Codex Committee (NCC), food safety risk analysis and risk profiling, and INFOSAN. Two sessions were presented by the INFOSAN Secretariat. These sessions illustrated the functions of INFOSAN as a global network, how different agencies in Bhutan could nominate INFOSAN Focal Points to join the Network, and lastly, how INFOSAN could be strengthened in Bhutan. Group discussion among participants elaborated action items to be taken forward by national agencies in Bhutan to strengthen NCCs.

#### **Nepal - Advocacy Meeting on Codex and INFOSAN networking, 22 September 2016**

The Department of Food Technology and Quality Control (DFTQC), Ministry of Agriculture Development, Government of Nepal, organized a similar meeting on 22 September 2016 which covered most of the same themes, including the function of the CAC, strategies for strengthening the NCC, and INFOSAN. Two sessions were presented by the INFOSAN Secretariat that illustrated how INFOSAN functions globally and provided examples of how INFOSAN has been utilized in Nepal in the past. Explanations were also provided with respect to how different agencies in Nepal could join the Network as Focal Points in order to strengthen INFOSAN at the national level. Group discussion among participants resulted in several action items to be undertaken by national agencies in Nepal to strengthen NCCs.

#### **Bangladesh – National Workshop on Strengthening INFOSAN Activities in Bangladesh, 27-28 September 2016, Dhaka, Bangladesh**

The workshop was held as part of the FAO project on strengthening capacity development in the areas of food safety and food control in Bangladesh. It was aimed at advocating for the need for food control agencies, such as the Ministry of Health and Family Welfare (MOHFW) and the Bangladesh Food Safety Authority (BFSA), to collaborate and cooperate when managing food incidents and emergencies that may occur due to the sale and consumption of unsafe food. Strengthening of national capacity to manage food safety events, sharing information on food safety issues of global interest and promoting partnership with INFOSAN members are key areas of importance for Bangladesh. As Bangladesh becomes an important player in global food trade, active participation in the work of INFOSAN will be integral to ensure that its products pose no risk to public health and that it maintains a solid reputation as a producer of safe foods. At the conclusion of the workshop, in order to reflect the interest of the participants to strengthen



INFOSAN in the country, an “INFOSAN in Bangladesh” group was established on the INFOSAN Community Website. Establishing this group is an initial step to encourage collaboration and cooperation among the food control agencies. Overall, the workshop allowed participants to gain a better understanding of what INFOSAN is and how it operates during an international food safety emergency. It also provided an opportunity to clarify the designation process for INFOSAN Emergency Contact Points and Focal Points from the various agencies involved in food safety in Bangladesh. Participants learned how and when to issue food safety alerts as part of a national food alert system and also reviewed and adapted their national food safety emergency response plan. Finally, the workshop served as an important step towards strengthened national cross-sectoral collaboration, partnership, and information sharing on matters of food safety, including during emergencies.

### **Mexico - National INFOSAN Workshop in Mexico, 12-13 June 2017, Mexico City, Mexico**

A national multi-sector workshop was organized in Mexico and attended by more than 40 participants from the Ministry of Health, Safety and Agrifood Quality, the Federal Commission for the Protection against Sanitary Risk, and the Directorate General of Epidemiology. During the workshop, participants were able to gain a better understanding of how INFOSAN operates during an international food safety emergency, including in the context of the International Health Regulations (2005). Members from the different national agencies discussed and clarified their respective roles and responsibilities and reviewed their various protocols for communicating between sectors during food safety emergencies. The workshop also provided the opportunity for members to receive hands-on training of the INFOSAN Community Website. Following the meeting, a smaller working group with participants from each agency was formed in order to formalize an agreement about information sharing between the three participating agencies during emergencies. Multiple focal points have been designated from each of the relevant agencies in Mexico, creating a robust “national INFOSAN” network to help facilitate communication and collaboration on matters of food safety.

## **IMPROVING PREPAREDNESS THROUGH ONLINE SIMULATION EXERCISES**



Several online emergency communication exercises were organized for INFOSAN Emergency Contact Points and National IHR Focal Points, in line with the priority activities outlined in the 2014/2015 Activity Report. Two exercises were conducted in English and Spanish for countries from the region of the Americas in November 2016 and November 2017 and two exercises were conducted in English and French for countries from the African region in April and November 2017. In total, contact points from 17 countries participated from the Americas (Argentina, Bahamas, Barbados, Brazil, Canada, Chile, Colombia, Costa Rica, Ecuador, Guyana, Honduras, Mexico,

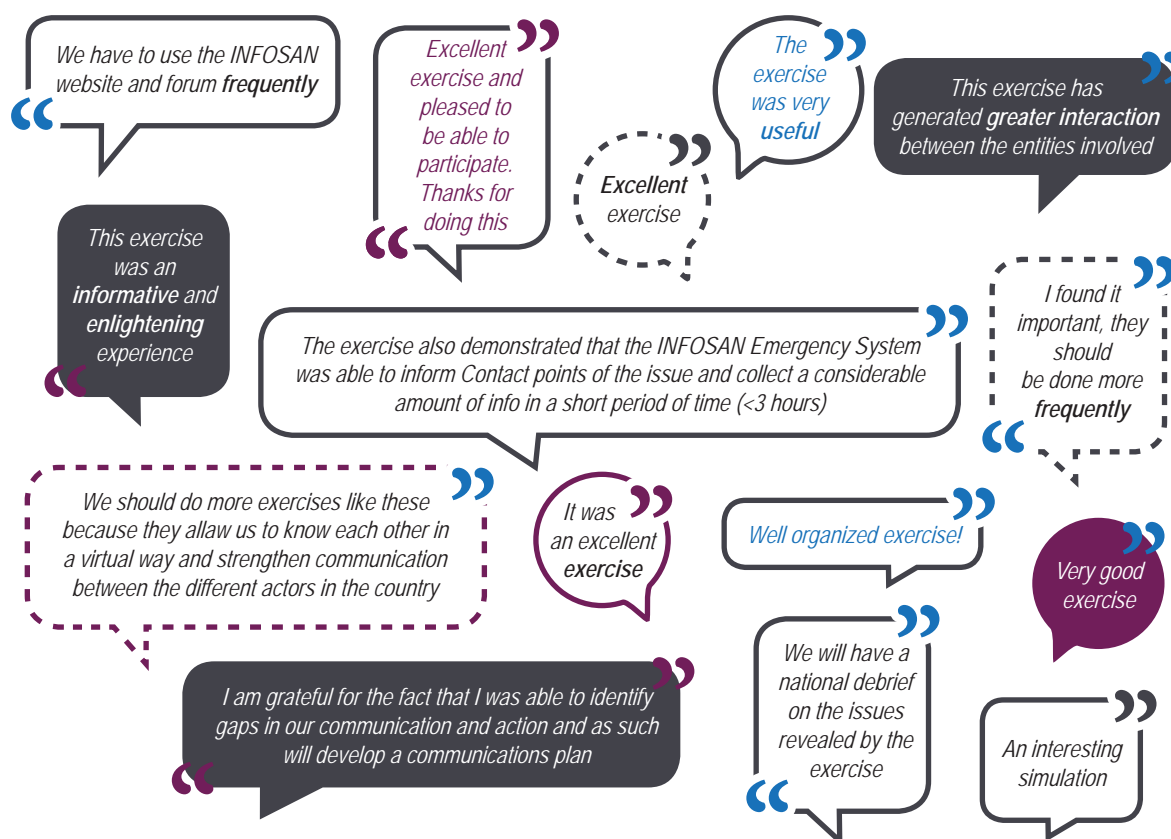


Nicaragua, Saint Lucia, Suriname, Trinidad and Tobago, USA) and 17 countries participated from Africa (Benin, Burkina Faso, Burundi, Cameroon, Chad, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Lesotho, Niger, Nigeria, Senegal, South Africa, Tanzania, and Togo).

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.

Upon conclusion of each exercise, participants were asked to complete a short survey to provide their feedback. All respondents agreed or strongly agreed that the exercise was useful and achieved its objectives. Many participants provided written feedback:



Some participants also requested that a next-level exercise be developed to test additional competencies that were not focused on during this exercise, and to include Focal Points in such an exercise. Given the positive feedback received, further development and implementation of exercises will continue in the next biennium.

## 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.

In a demonstration of leadership, INFOSAN members from Canada (at the Canadian Food Inspection Agency, the Public Health Agency of Canada and Health Canada) took the initiative to coordinate and

deliver eight webinars as part of a technical webinar series that was facilitated by the INFOSAN Secretariat in 2016. 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 in Canada that are of interest to INFOSAN members around the globe. Each live presentation in this series was delivered by a different technical expert in Canada and included a question and answer period at the end. Overall, members from more than 60 different countries registered to attend at least one of the webinars during the series. On average, each live webinar was attended by 25 participants, representing 15 different countries. Recordings of the webinars are available to stream online (See Appendix C).

In 2017, a second edition of the INFOSAN Technical Webinar Series was launched by the INFOSAN Secretariat in collaboration with the United States Food and Drug Administration (FDA) with participation from the United States Centers for Disease Control and Prevention (CDC) and the United States Department of Agriculture (USDA). Six webinars were delivered by experts from the USA on a variety of technical topics related to food safety from an American perspective. Overall, INFOSAN members from 46 different countries attended the series live, with an average of 21 attendees per webinar. Recordings of the webinars are available to stream online (See Appendix C).

*“ Given the global nature of our food supply, INFOSAN continues to provide an important platform for information sharing on international food safety issues. Australia looks forward to further developing relationships with our INFOSAN colleagues and building a strong global network for food safety ”*



Food Incident Duty Team  
Food Standards Australia New Zealand  
INFOSAN Emergency Contact Point,  
AUSTRALIA

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

### **Africa: Strengthening INFOSAN in SADC countries in support of the development of an African Rapid Alert System for Food and Feed, 1-2 November 2016, Johannesburg, South Africa**

In November 2016, a sub-regional workshop involving INFOSAN members designated in countries of the Southern African Development Community (SADC) was organized by FAO and WHO with support from the Africa Solidarity Trust Fund (ASTF) and in coordination with the African Union (AU). The two-day workshop brought together 24 representative officials from the relevant authorities involved in food safety from 11 Member States. The workshop resulted in a number of positive outcomes for participants including a better understanding of how INFOSAN operates, and how it supports the AU plans to develop an African Rapid Alert System for Food and Feed. Participants also learned about effective risk communication practices during food safety emergencies and received hands-on training of the INFOSAN Community Website. Finally, participants developed six-month action plans to strengthen participation in INFOSAN that were monitored and supported by the Secretariat. During the biennium, the INFOSAN Secretariat has continued to engage with the African Union Food Safety Management Coordination Mechanism (AUFSMCM) to support the implementation of an African Rapid Alert System for Food and Feed, using INFOSAN as the platform upon which to base further development.

### **Asia: New Science for Food Safety - An international conference on regional perspectives of food science developments in Asia in support of INFOSAN 7-10 November 2016, Singapore**

WHO and FAO co-sponsored a technical meeting, 7-10 November 2016, organized by the Nanyang Technological University (NTU) of Singapore for INFOSAN members in Asia, food safety regulators, academics and laboratory scientist experts from around the world.

The meeting had four objectives, including:



1. provide a unique forum for knowledge exchange between food safety regulators and food safety scientists from Asia, Europe and the Americas with a focus on new scientific developments in food science and risk assessment;
2. facilitate the uptake of new scientific advances including a training on Next-Generation Sequencing (NGS) and improve regional collaboration in Asia in order to bolster the safety and efficiency of the regional – and global – food supply chain;
3. discuss the role of INFOSAN and identify implications of new technologies/initiatives for the detection and response to food safety

- emergencies and mitigation of foodborne disease outbreaks and food fraud to share with the INFOSAN community; and
4. debate the systematic use of a risk analysis framework including science-based, independent risk assessment and new foodborne disease burden estimates to prioritize and focus food safety and food control action.

The overarching goal of this meeting was to add to the experience of INFOSAN members in the region by enabling an environment for information sharing on emerging technologies and methodologies that may be unfamiliar or under-utilized. Through presentations and lively discussions, the meeting format allowed for reflection on new developments in food science and identified options for integrating new technologies and information to improve food safety in the future.

**Americas: Third and Fourth Regional Meetings of INFOSAN in the Americas: 29 November–1 December 2016, San Jose, Costa Rica and 27-28 November 2017, Miami, USA.**

INFOSAN members from 25 countries of the WHO Region for the Americas met together for the third time from 29 November-1 December 2016 in San José, Costa Rica. During the meeting, participants discussed progress and challenges related to the implementation of strategic actions outlined in the Regional Strategy to Strengthen INFOSAN in the Americas. Participants also learned about recent INFOSAN activities at the global level and reviewed regional progress and challenges in strengthening INFOSAN in the Americas. 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.

The fourth regional meeting of INFOSAN members from the Americas was held from 27-28 November 2017, Miami, USA. The meeting was organized in such a way to include a joint session between INFOSAN members and National IHR Focal Points. This proved to be a great opportunity to discuss issues related to the interaction between IHR and INFOSAN and is the first time we have incorporated such an opportunity during one of our regional INFOSAN meetings. In particular, participants had the opportunity to review a draft Protocol for information sharing with national and international partners during food safety events and outbreaks of foodborne illness, and determine if it could be adapted for use in their respective national context.

These annual regional meetings have been instrumental in forging a strong community of INFOSAN members in the Americas. As a result, there has been an expansion of INFOSAN-related activities in the region as well as 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.

## 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. On 2-4 November 2016, the INFOSAN Secretariat

participated in the fourth forum between the food safety agencies and the trade and economic agencies of the CPLP where further collaboration and engagement was discussed. Moving forward, the CPLP can assist with the identification of INFOSAN members in the remaining CPLP countries and can facilitate their active participation in Network activities.

### 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 2016 on 13-15 April in Parma, Italy and 13-15 November in Bratislava, Slovakia and two in 2017 on 3-4 May 2017 in Parma, Italy and on 22-23 November in Lisbon, Portugal. 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 in order to provide perspectives from beyond Europe. For example, the INFOSAN Secretariat prepared and presented a briefing note on the topic of Enterohemorrhagic *Escherichia coli* (EHEC) in flour in collaboration with the EREN Coordinator and the INFOSAN Emergency Contact Point in Canada from the Canadian Food Inspection Agency (CFIA). The presentation of this topic resulted in the further exchange of information between colleagues in Europe and Canada and demonstrated the importance of this kind of cross network collaboration.

### Asia-Pacific Economic Cooperation (APEC)

From 11-13 October 2017, the INFOSAN Secretariat participated in an APEC workshop on the strengthening of food safety emergency systems of APEC Economies. Discussions centered around the important linkages between INFOSAN and other legal frameworks including International Health Regulations (2005) (IHR), as well as the European Rapid Alert System for Food and Feed (RASFF) and other regional initiatives. In addition, the INFOSAN Secretariat

provided guidance to participants about incorporating principles of risk communication into food safety alerts during emergencies with examples from INFOSAN. Reference was made to the FAO/WHO Handbook for Risk Communication applied to Food Safety, the FAO/WHO Framework for developing national food safety emergency response plans, and the FAO/WHO guide for developing and improving national food recall systems. A detailed overview of the FAO/WHO Framework for developing national food safety emergency response plans that explained how the guide could be used by participants to create or improve their response plans was also presented. The INFOSAN Secretariat also explained how multinational food safety emergencies are managed from the INFOSAN perspective. Participants concluded that it will be important to maintain the communication between APEC economies on matters of food safety and that international standards/guidance for communication should be adhered to. It was also concluded that INFOSAN will be a useful tool to utilize in order to facilitate communication.

## MEETING OF THE INFOSAN ADVOCATES: AN EXPERT FOCUS GROUP

In December 2017, the INFOSAN Secretariat hosted a two-day meeting with a small group of INFOSAN members at the WHO headquarters in Geneva, Switzerland. Members were selected to participate in this meeting based on their experience and knowledge of INFOSAN at the operational and technical levels and their shared enthusiasm for strengthening the Network. In different ways, each participant has been an active champion for INFOSAN as well as a strong advocate for improved collaboration and information sharing during international food safety emergencies. Because of their demonstrated dedication to improving INFOSAN, these meeting participants have been referred to as the INFOSAN Advocates. It was envisioned by the INFOSAN Secretariat that these INFOSAN Advocates would meet together to exchange ideas and experiences related to the improvement of INFOSAN, advocate for such improvements within their respective spheres of influence, and then inspire other INFOSAN members to follow in their paths, leading to a more active, effective and impactful INFOSAN. The meeting objectives were to:

1. share technical experiences related to the proactive sharing of recall information (concerning imported or exported foods);
2. exchange ideas about improving communication within INFOSAN; and
3. collectively increase, in a coordinated manner, INFOSAN members' participation and support to the Network.

A report of this meeting has been shared with all INFOSAN members on the INFOSAN Community Website. Recommendations from this meeting will be implemented by the INFOSAN Secretariat to strengthen the Network and will inform the development of a new strategic framework for INFOSAN to be developed in the coming biennium.



# The Network Structure

## MEMBERSHIP OVERVIEW

Membership to INFOSAN is voluntary, but is restricted to representatives from national and regional government authorities. Each member should be officially designated. In order 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, 188 Member States have joined INFOSAN. In addition, some Associate Member States and overseas areas/territories of Member States have also designated INFOSAN members.<sup>1</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>2</sup>, with an INFOSAN Emergency Contact Point registered on the INFOSAN Community Website as of the end of 2017, compared to the end of 2016 and 2015, respectively.

As of the end of 2017, 160 (82%) of 194 Member States have an INFOSAN Emergency Contact Point registered, representing a 9-point increase during the 2016/2017 biennium. INFOSAN membership was particularly enhanced in the African Region during this period; 10 new Member States registered an Emergency Contact Point on the INFOSAN Community Website. Similarly, seven new Member States from the Region of the Americas designated INFOSAN Emergency Contact Points.

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

<sup>1</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>2</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>

more INFOSAN Focal Point(s) registered on the INFOSAN Community Website as of the end of 2017, compared to the end of 2016 and 2015, respectively.

As of the end of 2017, 123 (63%) of 194 Member States have one or more INFOSAN Focal Point(s) registered, representing a 7-point increase during the 2016/2017 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 African Region and the Region of the Americas 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 2014/2015 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 (2018/2019) 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 2017

REGION		2017, n (%) <sup>*</sup>	2016, n (%) <sup>*</sup>	2015, n (%) <sup>*</sup>	Increase during 2016/2017 biennium n (%) <sup>**</sup>
African Region	47 Member States	36 (77%)	32 (68%)	26 (55%)	10 (38%)
Region of the Americas	35 Member States	32 (91%)	30 (85%)	25 (71%)	7 (30%)
	4 Associate Members	2 (50%)	2 (50%)	2 (50%)	0
Eastern Mediterranean Region	21 Member States	13 (62%)	13 (62%)	13 (62%)	0
European Region	53 Member States	47 (89%)	45 (85%)	45 (85%)	2 (4%)
South-East Asia Region	11 Member States	10 (91%)	10 (91%)	10 (91%)	0
Western Pacific Region	27 Member States	22 (81%)	22 (81%)	22 (81%)	0
Global	194 Member States 4 Associate Members	160 (82%) 2 (50%)	152 (78%) 2 (50%)	141 (73%) 2 (50%)	19 (13%) 0

\* 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 2017,  $36/47 = 77\%$ .

\*\* Percentage is calculated by dividing the number of Member States (or Associate Members) in each region where an INFOSAN Emergency Contact Point registered on the INFOSAN Community Website during 2016/2017 by the number of Member States (or Associate Members) in that region where an INFOSAN Emergency Contact Point was already registered on the INFOSAN Community Website as of the end of 2015. For example, the increase during the 2016/2017 biennium in the African Region is  $(36-26)/26 = 10/26 = 38\%$ .



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		2017, n (%*)	2016, n (%*)	2015, n (%*)	Increase during 2016/2017 biennium n (%**)
African Region	47 Member States	30 (64%)	28 (60%)	23 (49%)	7 (30%)
Region of the Americas	35 Member States	29 (82%)	27 (77%)	23 (66%)	6 (26%)
	4 Associate Members	-	-	-	-
	12 areas/territories	3 (25%)	3 (25%)	3 (25%)	0
Eastern Mediterranean Region	21 Member States	10 (48%)	10 (48%)	10 (48%)	0
European Region	53 Member States	31 (58%)	30 (57%)	30 (57%)	1 (3%)
South-East Asia Region	11 Member States	6 (55%)	5 (45%)	5 (45%)	1 (20%)
Western Pacific Region	27 Member States	17 (63%)	17 (63%)	18 (67%)	-1 (-5%)
	10 areas/territories	5 (50%)	4 (40%)	4 (40%)	1 (20%)
Global	194 Member States	123 (63%)	117 (60%)	109 (56%)	14 (13%)
	4 Associate Members	-	-	-	-
	22 areas/territories	8 (36%)	7 (32%)	7 (32%)	1 (14%)

\* 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 2017,  $30/47 = 64\%$ .

\*\* Percentage is calculated by dividing the number of Member States (or Associate Members or areas/territories) in each region where an INFOSAN Focal Point registered on the INFOSAN Community Website during 2016/2017 by the number of Member States (or Associate Members or areas/territories) in that region where at least one INFOSAN Point was already registered on the INFOSAN Community Website as of the end of 2015. For example, the increase during the 2016/2017 biennium in the African Region is  $(30-23)/23 = 7/23 = 30\%$ .

## REPRESENTATION BY SECTOR

Data regarding membership by sector collected via the online registration form for the INFOSAN Community Website was analyzed for 176 INFOSAN Emergency Contact Points<sup>3</sup> (from 160 Member States and two associate Member States) and 330 INFOSAN Focal Points (from 123 Member States and eight areas/territories of participating Member States).

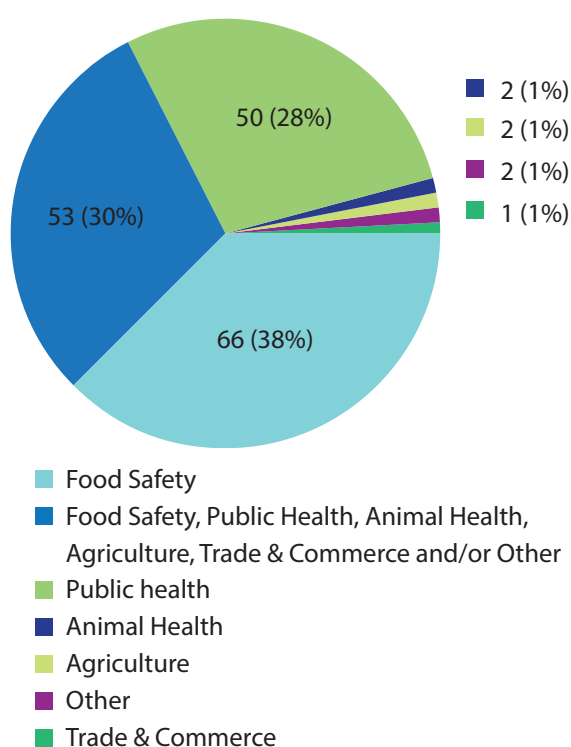
Among INFOSAN Emergency Contact Points, 66 (38%) reported being based in an authority responsible for food safety; 50 (28%) in an authority responsible for public health; two (1%) in an authority responsible for agriculture; two (1%) in an authority responsible for animal health; one (1%) in an authority responsible for trade and commerce; and two (1%) in authorities representing "other" sectors. The remaining 53 (30%) reported being based in an authority combining food safety, public health, animal health, agriculture, trade and commerce and/or other sectors (Figure 1).

For INFOSAN Focal Points, 97 (29%) reported being based in an authority responsible for food safety; 82 (25%) in an authority responsible for public health; 16 (5%) in an authority responsible for agriculture; 10 (3%) in an authority responsible for animal health; 10 (3%) in an authority responsible for trade and commerce; and 10 (3%) in authorities representing "other" sectors. The

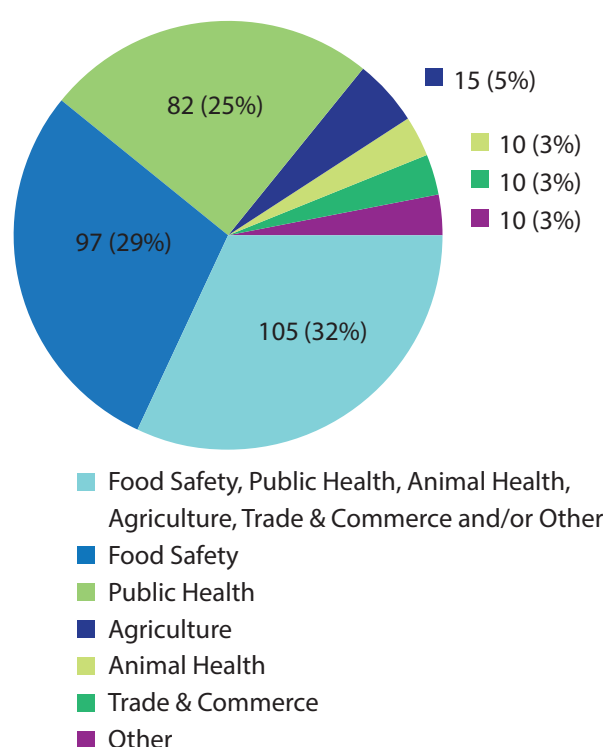
<sup>3</sup> Nine Member States have designated more than one INFOSAN Emergency Contact Point for specific operational reasons.

remaining 105 (32%) reported being based in a national authority that represents food safety, public health, animal health, agriculture, trade and commerce and/or other sectors (Figure 2). There are 60 Member States that have designated one INFOSAN Focal Point; 38 Member States have designated two Focal Points; 15 Member States have designated three Focal Points; and 18 Member States have designated four or more Focal Points.

**FIGURE 1**  
**EMERGENCY CONTACT POINTS**  
BY GOVERNMENT SECTOR (N=176)



**FIGURE 2**  
**FOCAL POINTS**  
BY GOVERNMENT SECTOR (N=330)



The proportion of INFOSAN members across government sectors continued to become more diverse, with more INFOSAN Focal Points reporting being based in an authority responsible for public health or a cross-section of other responsibilities than was reported in the previous biennium. This is a result of the work undertaken at the Secretariat to encourage Member States to designate additional INFOSAN Focal Points from government sectors not currently represented to further strengthen cross-sectoral coordination and cooperation at the national level.

It is important for Emergency Contact Points and Focal Points from different agencies in the same country to understand each other's roles and responsibilities in case a national food safety emergency response effort needs to be made. To ensure a coordinated approach, best practice suggests developing a national food safety emergency response plan in collaboration with all relevant agencies.<sup>1</sup>

<sup>1</sup> See FAO/WHO framework for developing national food safety emergency response plans: <http://www.fao.org/docrep/013/i1686e/i1686e00.pdf>

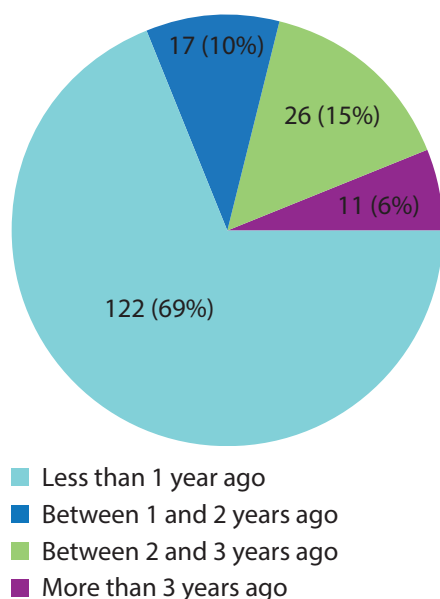
## THE INFOSAN COMMUNITY WEBSITE

Since its launch in 2012, the INFOSAN Community Website has been used to engage with members and as the primary tool for disseminating food safety information to members during emergency situations. The website now supports more than 500 users around the globe and encourages each of them to connect with one another to build and exchange knowledge on global food safety matters. In addition to Emergency Contact Points and Focal Points from Member States, users include FAO and WHO staff, INFOSAN Advisory Group Members, regional food safety authority contact points, and WHO Collaborating Centre contact points. INFOSAN members have a wealth of knowledge and expertise, and are encouraged to utilize the discussion forum on the INFOSAN Community Website to share and discuss important global food safety issues.

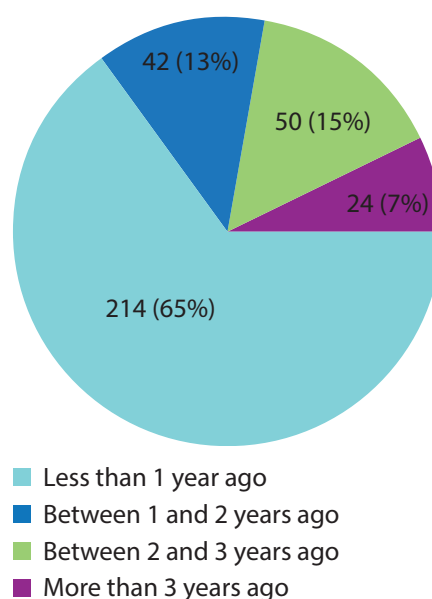
### Analysis of Members' Access to the INFOSAN Community Website

Analyzing access patterns to the INFOSAN Community Website is the most basic measure to assess how active INFOSAN members are, including both Emergency Contact Points (N=176) and Focal Points (N=330). As of the end of 2017, 122 (69%) Emergency Contact Points had accessed the website within the past year, 17 (10%) between one and two years ago, 26 (15%) between two and three years ago, and 11 (6%) more than three years ago (Figure 3). Concerning Focal Points, 214 (66%) had accessed the website less than one year ago, 42 (13%) between one and two years ago, 50 (15%) between two and three years ago, and 24 (7%) more than three years ago (Figure 4).

**FIGURE 3**  
**EMERGENCY CONTACT POINTS**  
LAST ACCESS TO THE INFOSAN  
COMMUNITY WEBSITE, (N=176)



**FIGURE 4**  
**FOCAL POINTS**  
LAST ACCESS TO THE INFOSAN  
COMMUNITY WEBSITE, (N=330)



Members who have not accessed the website in over a year are missing out on important information shared by the INFOSAN Secretariat and other members of the Network.

Monitoring website usage enables the INFOSAN Secretariat to prioritize follow-up actions towards those members who, while registered on the INFOSAN Community Website, may no longer hold their position or who need encouragement to use the website to share information such as routine surveillance data or lessons learned from outbreaks of foodborne illness.

### **Discussions initiated on the INFOSAN Community Website**

Members are encouraged to use the discussion forum on the INFOSAN Community Website to post short summaries of risk management actions taken in response to particular food safety emergencies, outbreaks, or food recalls. In this way, INFOSAN members who may read a headline in the news about a particular event can turn to the INFOSAN Community Website for an update and gain clarity as to whether or not their country is involved by reading a post of the relevant Emergency Contact Point or by engaging in a discussion directly. Members can also use the forum to pose questions or seek advice on any relevant topic in that which INFOSAN members may have related expertise.

In 2016/2017, a total of 59 topics were initiated in the discussion forum of the INFOSAN Community Website, including 17 (29%) by INFOSAN members, 36 (61%) by the INFOSAN Secretariat, and 6 (10%) by another WHO staff member. The average number of comments per topic was 4, with a maximum of 32 comments (median = 1). On average, 4 individuals were active contributors per topic, with a minimum of 1 and a maximum of 21 (median = 2). The average number of views per topic was 95, with a minimum of 7 and a maximum of 505 (median = 66). The average time that INFOSAN members remained actively engaged in a discussion was 13 days, with a minimum of 1 day and a maximum of 104 days (median = 1). As indicators, these numbers suggest that many more INFOSAN members are passively engaging with content on the INFOSAN Community Website as readers, compared to those who are actively contributing new information by posting in the forum.

Compared to previous years, the INFOSAN Community Website was used in new ways in 2016 and 2017. For example, online webinars were recorded and posted on the INFOSAN Community Website. In this way, members who could not attend the webinars live, or who were interested to listen again, were able to do so at their leisure. Several strategies for encouraging improved participation will be employed in the future including improved user-friendliness of the website and additional guidance and training for new members.

### **Upgrading the INFOSAN Community Website**

Throughout 2016/2017, the INFOSAN Secretariat has been working towards an updated version of the INFOSAN Community Website (ICW). In order to improve the ICW, a number of fixes have been identified which would serve to increase accessibility, making it more engaging and easier for members to read and contribute information and communicate with other members of the Network on matters concerning global food safety, including during emergencies. One of these fixes would be to ensure the website was mobile-compatible across multiple mobile devices (e.g. phones, tablets, etc.). Feedback from INFOSAN members has allowed for the Secretariat to determine a clear objective for relaunching an updated ICW as a state-of-the-art knowledge

exchange portal that encourages increased engagement of INFOSAN members and a higher volume of active participants contributing to the ICW on a regular basis. The new ICW should facilitate knowledge management through three core activities:

1. knowledge access → by providing a single integrated point of access to a variety of relevant food safety emergency information for INFOSAN members around the world;
2. knowledge creation → by creating and maintaining knowledge directories about portal generated content including details about food safety events and emergencies; and
3. knowledge transfer and exchange → by facilitating information sharing and distribution and providing collaborative features that help to foster the Community of Practice among INFOSAN members.

## THE RISING PROFILE OF INFOSAN

### INFOSAN IN THE TWITTERSPHERE AND OTHER MEDIA

- In the 2016/2017 biennium #INFOSAN was tagged in 95 tweets from 40 different accounts, representing individuals, news outlets, consumer organizations, academic institutions and government authorities
- Some specific events that were the subject of multiple tweets include:
  - The regional INFOSAN meetings of members in the Americas hosted in Costa Rica in November-December 2016 and in the USA in November 2017
  - The INFOSAN “New Science for Food Safety” meeting at Nanyang Technological University, Singapore in November 2016
  - The outbreak of salmonellosis in France linked to contaminated infant formula, and the subsequent export of the implicated infant formula to over 80 countries worldwide



- In the 2016/2017 biennium, INFOSAN was mentioned in 37 Facebook posts from 33 different accounts, representing individuals, news outlets, consumer organizations and government authorities.
- In 2016, a large number of Facebook posts focused on INFOSAN meetings such as the “New Science for Food Safety” meeting, referenced above, and the INFOSAN Regional Meeting in Costa Rica.

- In 2017, the majority of Facebook posts concerned INFOSAN events such as the contamination of eggs, egg products and poultry with Fipronil, and the outbreak of salmonellosis in France linked to *Salmonella* Agona contaminated infant formula products.

As observed in past years, several food safety events captured headlines around the globe in 2016 and 2017, 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 IN THE ACADEMIC LITERATURE

To find references to INFOSAN in the scholarly literature, the terms “INFOSAN” and “International Food Safety Authorities Network” were first searched using Science Direct. Science Direct is one of the largest online collections of published scientific research in the world, and covers a wide range of topics that are grouped into four main sections: Physical Sciences and Engineering; Life Sciences (including agricultural, biological and environmental sciences); Health Sciences (including medical and veterinary sciences); and Social Sciences and the Humanities. Subsequently, PubMed Central was utilized, searching the same terms. PubMed Central is a free full-text archive of biomedical and life sciences journal literature at the U.S. National Institutes of Health’s National Library of Medicine. Lastly, Google Scholar was searched using the search term “INFOSAN” and “International Food Safety Authorities Network”. Google Scholar searches across disciplines to find articles, theses, books, abstracts, etc., from academic publishers, online repositories, universities and other websites. The articles reviewed included those written in English that were either publicly available or accessible via WHO subscription.

### Results:

- A total of 119 peer-reviewed articles and books published in the 2016/2017 biennium were identified through the aforementioned methods.
- 20/119 (17%) of the articles actually described the function of INFOSAN in some way (some very briefly), 38/119 (32%) of the articles mentioned INFOSAN, while the remaining 63/119<sup>2</sup> (53%) of the articles used an INFOSAN information product as a reference to provide support for their paper.
- 54/63 (86%) of the articles referenced one of 15 different INFOSAN Information Notes; 3/63 (5%) provided an INFOSAN alert as supporting information and 6/63 (9%) used an INFOSAN Activity Report as reference.
- An individual affiliated with the WHO was listed as an author for 15/119 (13%) of the articles.

## INFOSAN IN JOINT EXTERNAL EVALUATION MISSION REPORTS

The Joint External Evaluation (JEE) is a voluntary, collaborative, multisectoral process used to assess country capacity to prevent, detect and rapidly respond to public health risks occurring naturally or due to deliberate or accidental events. The purpose of the external evaluation is to assess country-specific status, progress in achieving the targets under Annex 1 of the International Health Regulations (2005) (IHR), and recommend priority actions to be taken across the 19 technical areas being evaluated, one of which is Food Safety. This section includes as an indicator, participation in INFOSAN by Member States, and the designation of an INFOSAN Emergency Contact Point and at least one INFOSAN Focal Point.

<sup>2</sup> Two articles contained a description of INFOSAN and utilized an INFOSAN Information Product



During 2016 and 2017, 48 JEE mission reports were published by WHO, of which 32 (67%) mentioned INFOSAN in some capacity. The inclusion of INFOSAN in the reports ranged from a recommendation that a Member State should join INFOSAN and designate an INFOSAN Emergency Contact Point and Focal Point(s), to describing the particular INFOSAN setup in a Member State.

## INFOSAN AT INTERNATIONAL CONFERENCES AND UNIVERSITY TRAINING COURSES

The INFOSAN Secretariat discussed the activities of the Network at a number of international conferences and university training courses in 2016/2017. A selection of these is listed below:

- International Union of Food Science and Technology (IUFoST) and Chinese Institute of Food Science and Technology (CIFST) International Forum on Food Safety, Beijing, China, 15 April 2016
- International Association of Food Protection (IAFP) conference, St Louis, USA, 31 July - 3 August 2016
- 18th IUFoST World Congress of Food Science and Technology, Dublin, Ireland, 21-25 August 2016
- IUFoST conference on foodborne disease surveillance, Bogor Agricultural University, Bogor, Indonesia, 8-9 December 2016
- Food Safety Seminar, National University of Singapore, (NUS), Singapore, 12 December 2016
- IAFP European Symposium on Food Safety, Brussels, Belgium, 29-31 March 2017
- SEA-EU-Net workshop on Tackling Antimicrobial Resistance in the Food Chain: An Association of Southeast Asian Nations (ASEAN)-European Union (EU) Partnership, Bangkok, Thailand, 3-4 April 2017
- IUFoST/Chinese Institute of Food Science and Technology (CIFST) International Forum on Food Safety, Beijing, China, 19-21 April 2017
- PulseNet International, Winnipeg, Canada, 21-22 June 2017,
- IAFP Food Safety Conference held in Tampa, Florida, 8-13 July 2017
- Global consultation on Whole Genome Sequencing for Foodborne Disease Surveillance and Outbreak Investigation; side event at the Codex Alimentarius Commission Meeting 40 held in Geneva, Switzerland, 21 July 2017



- Bangladesh Food Safety Conference, themed “Protecting consumers: A shared responsibility”, 23-24 August 2017
- Meeting on the Establishment and Operationalization of the African Union “Food Safety Authority” held in Nairobi, Kenya, 13 October 2017
- Global understanding of food fraud: towards global action for prevention and mitigation of food fraud held in Beijing 30-31 October 2017
- China International Food Safety and Quality (CIFSQ) conference held in Beijing 1-2 November 2017

*“Congratulations to the entire INFOSAN team for the efforts made to ensure close collaboration between the different member countries and to promote the rapid exchange of information during food safety events to allow for the better management during crisis situations ”*



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## Conclusion and Future Directions

INFOSAN is a member-driven Network and a number of 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 meeting of the INFOSAN Advocates proved a useful and inspiring exercise, bringing together a small group of such champions to discuss their efforts to actively participate in INFOSAN. The exchange of ideas and experiences related to the improvement of INFOSAN, advocacy for such improvements within their respective spheres of influence, and the encouragement of other INFOSAN members to be more active, effective and engaged, is central to the vision supported by the INFOSAN Secretariat. More champions like the INFOSAN Advocates are needed in order to continue strengthening INFOSAN.

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 still 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 behind in engagement in INFOSAN and should be prioritized. In addition, limitations in basic surveillance capacity to detect foodborne diseases and food safety events still 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.

In the future, INFOSAN would benefit from further exploration into the experiences of members with respect to their participation in Network activities as a means to improve global food safety and prevent foodborne illness. Specifically, this could be achieved by first examining the INFOSAN Community Website to characterize membership and understand members' patterns of access, usage and contribution. In addition, efforts should be made to gain a broad and deep understanding of the barriers and enablers to active participation in INFOSAN in order to prioritize interventions by the Secretariat to improve engagement. Furthermore, members' perceptions should be 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. In this manner, the Secretariat shall be able to determine if and 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 remainder of the 2018/2019 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).

This will be achieved by focusing on three activity areas:

### **1. Emergency Activities**

- *Management of international food safety events of international relevance through effective interaction with all relevant partners*

### **2. National Capacity-building Activities**

- *Publication of technical information/guidance documents to assist member states to manage food safety events*
- *Strengthening of links to other regional food safety networks to improve information exchange*
- *Simulation exercises to test emergency communication protocols*
- *Delivery of online webinars on various topics to strengthen the Network (by WHO, FAO and INFOSAN Members)*

### **3. Communication**

- *Upgrade and relaunch of the INFOSAN Community Website to further facilitate information exchange and community development*
- *Convening of regional and/or global meetings of INFOSAN members*
- *Publication of quarterly activity summaries on the INFOSAN public website*
- *Publication of manuscripts related to INFOSAN in peer-reviewed journals*

These activities will be undertaken in consultation with the INFOSAN Advisory Group, and with the support of the new INFOSAN strategic framework.

## 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 2016/2017 which enabled INFOSAN to continue operating.

*“ In Nigeria, we cherish the role of INFOSAN in disseminating food safety risk information around the globe in a rapid and excellent manner. This helps us in making emergency responses to safeguard the health of the public. Also INFOSAN webinar series is an effective platform for understanding food safety risk management experiences of other nations ”*



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# Appendices

## APPENDIX A - INFOSAN EVENTS IN 2016

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 infections in New Zealand associated with frozen berries imported from China (continued from 2015 event)	01-Jan-2016	105	Region of the Americas, Western Pacific Region	Australia, Canada, China, Ireland, New Zealand	Biological	Hepatitis A virus	Fruit and fruit products	Frozen berries
Increase in <i>Salmonella</i> Enteritidis infections in Israel associated with eggs imported from Ukraine	14-Jan-2016	3	European Region	Israel, Ukraine	Biological	<i>Salmonella enterica</i> serotype Enteritidis	Eggs and egg products	Eggs
Outbreak of salmonellosis in the USA associated with cucumbers imported from Mexico	27-Jan-2016	7	Region of the Americas	Mexico, United States of America	Biological	<i>Salmonella enterica</i> serotype Poona	Vegetables and vegetable products	Cucumbers
Organic shake and meal replacement products produced in the USA contaminated with <i>Salmonella</i>	01-Feb-2016	11	Region of the Americas, Western Pacific Region	Australia, Canada, New Zealand, United States of America	Biological	<i>Salmonella enterica</i> serotype Virchow	Products for special nutritional use	Organic shake and meal replacement product
Frozen fish from Viet Nam contaminated with <i>Vibrio cholerae</i> and distributed to Panama	02-Feb-2016	6	Region of the Americas, Western Pacific Region	Panama, Viet Nam	Biological	<i>Vibrio cholerae</i>	Fish and other seafood	Frozen fish
Outbreak of salmonellosis in Australia linked to domestically produced salad greens distributed internationally	04-Feb-2016	7	South-East Asia Region, Western Pacific Region	Australia, China (Hong Kong SAR), Singapore, Thailand, Macau SAR, Malaysia	Biological	<i>Salmonella enterica</i> spp.	Vegetables and vegetable products	Pre-packaged salad greens
Sprouted flax/chia seed powder produced in Canada contaminated with <i>Salmonella</i> and distributed to the USA	24-Feb-2016	2	Region of the Americas	Canada, Colombia, United States of America	Biological	<i>Salmonella enterica</i> serotype Anatum	Nuts and oilseeds	Sprouted flax and chia seed powder
Candy bars produced in the Netherlands containing plastic fragments distributed internationally	25-Feb-2016	1	African Region, Region of the Americas, Eastern Mediterranean Region, European Region, South-East Asia Region, Western Pacific Region	Algeria, Andorra, Angola, Australia, Bangladesh, China (Hong Kong SAR), China (Taiwan), Egypt, Faroe Islands, Ghana, India, Iran, Iraq, Israel, Jordan, Lebanon, Libya, Madagascar, Maldives,	Physical	Plastic	Sugar and confectionary	Candy bars

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
				Mauritius, Monaco, Morocco, Nepal, Netherlands, New Caledonia, Republic of Korea, Saudi Arabia, South Africa, Sri Lanka, Sudan, Tanzania, Tunisia, Turkey, Ukraine, United Arab Emirates				
Outbreak of <i>Escherichia coli</i> O26 infections in Romania linked to domestically produced soft cheese distributed internationally	01-Mar-2016	32	European Region	Belgium, Germany, Italy, Romania, Spain	Biological	<i>Escherichia coli</i> O26	Milk and dairy products	Soft cheese
Outbreak of salmonellosis in the USA linked to pistachios exported to Canada, Mexico and Peru	14-Mar-2016	9	Region of the Americas	Canada, Mexico, Peru, United States of America	Biological	<i>Salmonella enterica</i> serotype Montevideo	Nuts and oilseeds	Pistachios
Chocolate produced in Ukraine containing foreign matter (packaging material) distributed to Hungary	30-Mar-2016	1	European Region	Hungary, Ukraine	Physical	Packaging material	Sugar and confectionary	Chocolate
Outbreak of Hepatitis A infections in Canada linked to organic wild blackberries from Bulgaria	18-Apr-2016	21	Region of the Americas, European Region	Bulgaria, Canada	Biological	Hepatitis A virus	Fruit and fruit products	Wild blackberries
Outbreak of suspected norovirus in Hong Kong SAR (China) potentially linked to consumption of raw oysters	28-Apr-2016	46	Western Pacific Region	China (Hong Kong SAR)	Biological	Norovirus	Fish and other seafood	Raw oysters
Eviscerated salted fish from the Russian Federation contaminated with <i>Clostridium botulinum</i> and distributed to the USA via Kazakhstan	02-May-2016	4	Region of the Americas, European Region	Kazakhstan, Russian Federation, United States of America	Biological	<i>Clostridium botulinum</i>	Fish and other seafood	Eviscerated salted fish
Investigation into possible food safety implications following reports of mass fish deaths in Viet Nam	19-May-2016	101	Western Pacific Region	Viet Nam	Unknown	Unknown	Fish and other seafood	Fish

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Sunflower kernel produced in the USA contaminated with <i>Listeria monocytogenes</i>	28-Jun-2016	7	Region of the Americas	Colombia, United States of America	Biological	<i>Listeria monocytogenes</i>	Legumes and pulses	Sunflower kernel
Outbreak of aflatoxicosis in Tanzania linked to contaminated maize	28-Jun-2016	99	African Region	Tanzania	Chemical	Aflatoxin	Legumes and pulses	Maize
Outbreak of campylobacteriosis among Swedish travelers returning from France	02-Jul-2016	1	European Region	France, Sweden	Biological	<i>Campylobacter</i>	Unknown	Unknown
Outbreak of Enterohemorrhagic Shiga toxin-producing <i>Escherichia coli</i> in the United Kingdom linked to mixed salad products	02-Jul-2016	31	European Region	Ireland, United Kingdom	Biological	<i>Escherichia coli</i> O157	Vegetables and vegetable products	Mixed salad
Outbreak of botulism in Spain linked to the consumption of domestically produced white beans	06-Jul-2016	48	European Region	Spain	Biological	<i>Clostridium botulinum</i>	Legumes and pulses	White beans
Outbreak of Anthrax in the Russian Federation linked to contact with Reindeer	12-Jul-2016	49	European Region	Russian Federation	Biological	<i>Bacillus anthracis</i>	Meat and meat products	Reindeer meat
Increased number of cases of cyclosporiasis in the United Kingdom among travelers returning from Mexico	13-Jul-2016	40	Region of the Americas, European Region	France, Mexico, Netherlands, United Kingdom	Biological	<i>Cyclospora cayentanensis</i>	Unknown	Unknown
Case of botulism in Ukraine associated with consumption of domestically produced smoked fish	18-Jul-2016	9	European Region	Ukraine	Biological	<i>Clostridium botulinum</i>	Fish and other seafood	Smoked fish
Cereal produced in Israel contaminated with <i>salmonella</i>	07-Aug-2016	8	European Region	Israel	Biological	<i>Salmonella enterica</i> spp.	Cereals and cereal-based products	Cereal
Outbreak of Brucellosis in Israel associated with domestically produced unpasteurized camel milk	15-Aug-2016	1	European Region	Israel	Biological	<i>Brucella</i> spp.	Milk and dairy products	Unpasteurized camel milk



EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Frozen potato products produced in Israel contaminated with <i>Listeria monocytogenes</i>	15-Aug-2016	1	European Region	Israel	Biological	<i>Listeria monocytogenes</i>	Vegetables and vegetable products	Frozen potato
Tahini (sesame paste) products produced in Israel contaminated with <i>Salmonella</i> and distributed internationally	15-Aug-2016	1	Region of the Americas, European Region	Canada, France, Germany, Israel, Russian Federation, United Kingdom, United States of America	Biological	<i>Salmonella enterica</i> spp.	Herbs, spices and condiments	Tahini (sesame paste)
Outbreak of Hepatitis A virus infections in USA linked to frozen scallops imported from the Philippines	16-Aug-2016	21	Region of the Americas, European Region	Philippines, United States of America	Biological	Hepatitis A virus	Fish and other seafood	Frozen scallops
Outbreak of Enterohemorrhagic Shiga toxin-producing <i>Escherichia coli</i> in the United Kingdom linked to domestically produced blue cheese	18-Aug-2016	33	Region of the Americas, European Region, Western Pacific Region	France, Singapore, United Kingdom, United States	Biological	<i>Escherichia coli</i> O157	Milk and dairy products	Blue cheese
Outbreak of Anthrax in Kazakhstan linked to the household slaughter of a bull-calf	29-Aug-2016	1	European Region	Kazakhstan	Biological	<i>Bacillus anthracis</i>	Meat and meat products	Home kill beef
Pork luncheon meat produced in China containing foreign matter (metal) distributed to Kiribati	16-Sep-2016	7	Western Pacific Region	China, Kiribati	Physical	Metal	Meat and meat products	Pork luncheon meat
Canned tuna produced in Thailand with high levels of histamine distributed to Singapore	19-Sep-2016	24	South-East Asia Region, Western Pacific Region	Singapore, Thailand	Chemical	Histamine	Fish and other seafood	Canned tuna
Outbreak of methanol poisoning in Ukraine linked to the consumption of illegally produced alcohol products	25-Sep-2016	6	European Region	Ukraine	Chemical	Methanol	Alcoholic beverages	Alcohol products
Curry spice produced in India with high levels of lead exported to the USA	03-Oct-2016	78	Region of the Americas, South-East Asia Region	Barbados, Colombia, Dominican Republic, Jamaica, India, United States of America	Chemical	Lead	Herbs, spices and condiments	Curry spice

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 botulism in the Russian Federation linked to the consumption of domestically produced canned vegetables	17-Oct-2016	1	European Region	Russian Federation	Biological	<i>Clostridium botulinum</i>	Vegetables and vegetable products	Canned vegetables
Outbreaks of salmonellosis, Norovirus infection and campylobacteriosis on a cruise ship in the Mediterranean	19-Oct-2016	8	N/A	N/A	Biological	<i>Salmonella enterica</i> serotype Enteritidis, Norovirus, <i>Campylobacter</i>	Unknown	Unknown
Outbreak of botulism in Germany and Spain associated with consumption of a fish product (salted and dried roach)	24-Nov-2016	10	European Region	Germany, Spain	Biological	<i>Clostridium botulinum</i>	Fish and other seafood	Salted and dried roach
Seizure of large consignment of rice in Singapore that was produced in India	28-Nov-2016	13	South-East Asia Region, Western Pacific Region	India, Singapore	None	None	Cereals and cereal-based products	Rice
Canned tuna produced in Colombia with high levels of mercury	11-Dec-2016	1	Region of the Americas	Colombia	Chemical	Mercury	Fish and other seafood	Canned tuna
Seizure of rice in Nigeria	21-Dec-2016	71	African Region	Nigeria	Biological	Unknown	Cereals and cereal-based products	Rice

## APPENDIX B - INFOSAN EVENTS IN 2017

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 Botulism in the Russian Federation linked to consumption of homemade dried bream	27-Jan-2017	1	European Region	Russian Federation	Biological	<i>Clostridium botulinum</i>	Fish and other seafood	Dried bream
Tahini (sesame paste) produced in Lebanon contaminated with <i>Salmonella</i> and distributed to the Netherlands	31-Jan-2017	14	Eastern Mediterranean Region, European Region	Lebanon, Netherlands	Biological	<i>Salmonella enterica</i> spp.	Herbs, spices and condiments	Tahini (sesame paste)
Multi-country outbreak of <i>Salmonella</i> Enteritidis infections linked to the consumption of internationally distributed eggs	20-Feb-2017	18	African Region, Region of the Americas, Eastern Mediterranean Region, European Region, Western Pacific Region	Angola, Bahrain, Belgium, Congo, Croatia, Denmark, Finland, France, Gambia, Germany, China (Hong Kong SAR), Italy, Luxembourg, Netherlands, Norway, Oman, Poland, Qatar, Sierra Leone, Sweden, United Arab Emirates, United States of America, United Kingdom	Biological	<i>Salmonella enterica</i> serotype Enteritidis	Eggs and egg products	Eggs
Wheat Pop Sesame Flavoured snack produced in China containing undeclared peanut allergen and distributed to Australia	23-Feb-2017	1	Western Pacific Region	Australia, China	Undeclared allergen	Peanut	Cereals and cereal-based products	Wheat snack
Presence of Oxyphenylbutazone in horse meat products produced in Canada and distributed internationally	28-Feb-2017	1	Region of the Americas, European Region, Western Pacific Region	Belgium, Canada, France, Japan	Chemical	Oxyphenylbutazone	Meat and meat products	Horse meat
Outbreak of suspected foodborne illness among school children in Algeria linked to consumption of a school lunch	06-Mar-2017	3	African Region	Algeria	Unknown	Unknown	Snacks, desserts and other foods	School lunch
Moringa leaf powder produced in Ghana contaminated with <i>Salmonella</i> and distributed to the United Kingdom	07-Mar-2017	23	African Region, European Region	Ghana, United Kingdom	Biological	<i>Salmonella enterica</i> spp.	Products for special nutritional use	Moringa leaf powder

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 Shiga toxin-producing <i>Escherichia coli</i> O157:H7 infections in the USA linked to domestically produced soy nut butter with distribution to Canada	08-Mar-2017	14	Region of the Americas	Canada, United States of America	Biological	<i>Escherichia coli</i> O157:H7	Nuts and oilseeds	Soy nut butter
Mung bean seeds produced in Australia contaminated with <i>Salmonella</i> and distributed to the United Kingdom	08-Mar-2017	20	European Region, Western Pacific Region	Australia, United Kingdom	Biological	<i>Salmonella enterica</i> spp.	Legumes and pulses	Mung bean seeds
Cooked frozen shrimp produced in China contaminated with <i>Salmonella</i> and distributed to Chile	08-Mar-2017	23	European Region, Western Pacific Region	Chile, China	Biological	<i>Salmonella enterica</i> spp.	Fish and other seafood	Cooked frozen shrimp
Outbreak of suspected foodborne illness among school children in Egypt linked to consumption of a school lunch	15-Mar-2017	2	Eastern Mediterranean Region	Egypt	Unknown	Unknown	Snacks, desserts and other foods	School lunch
Ground cumin produced in Turkey contaminated with <i>Salmonella</i> and distributed internationally	15-Mar-2017	13	European Region	Germany, Turkey	Biological	<i>Salmonella enterica</i> spp.	Herbs, spices and condiments	Ground cumin
Multi-country outbreak of salmonellosis linked to the consumption of internationally distributed sesame seeds and sesame-based products	17-Mar-2017	88	African Region, Eastern Mediterranean Region, European Region	France, Germany, Greece, Nigeria, Sudan, Switzerland	Biological	<i>Salmonella enterica</i> spp.	Nuts and oilseeds	Sesame seeds and sesame based products
Meat from Brazil reportedly adulterated	18-Mar-2017	102	Region of the Americas	Brazil, United States of America and unknown	Unknown	Unknown	Meat and meat products	Meat
Moringa leaf powder produced in India contaminated with <i>Salmonella</i> and distributed internationally	20-Mar-2017	29	European Region, South-East Asia Region	Germany, India, Switzerland	Biological	<i>Salmonella enterica</i> 11-z41:e,n,z15	Products for special nutritional use	Moringa leaf powder

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 Shiga toxin-producing <i>Escherichia coli</i> O121 infections in Canada linked to domestically produced flour distributed internationally	21-Apr-2017	48	Region of the Americas, Western Pacific Region	Bahamas, Canada, China (Hong Kong SAR), Saint Kitts and Nevis, Sint Maarten, United Kingdom (Bermuda, British Virgin islands)	Biological	<i>Escherichia coli</i> O121	Cereals and cereal-based products	Flour
Tuna from Indonesia, Philippines and Viet Nam contaminated with Hepatitis A virus distributed to the USA	03-May-2017	70	Region of the Americas, South-East Asia Region, Western Pacific Region	Indonesia, Philippines, United States of America, Viet Nam	Biological	Hepatitis A virus	Fish and other seafood	Tuna
Oysters from Ireland contaminated with marine bio toxin distributed to Canada	18-May -2017	1	Region of the Americas, European Region	Canada, Ireland	Chemical	Paralytic shellfish toxin	Fish and other seafood	Oysters
Veal from the Netherlands contaminated with Shiga toxin-producing <i>Escherichia coli</i> O103 and distributed internationally	18-May -2017	6	Region of the Americas, European Region	France, Germany, Netherlands, United States of America	Biological	<i>Escherichia coli</i> O103	Meat and meat products	Veal
Cheese produced in the USA contaminated with <i>Listeria monocytogenes</i>	19-May-2017	23	Region of the Americas	United States of America	Biological	<i>Listeria monocytogenes</i>	Milk and dairy products	Cheese
Fish from Argentina, China and Viet Nam chemically adulterated with phosphates and distributed to Brazil	22-May-2017	22	Region of the Americas, Western Pacific Region	Argentina, Brazil, China, Viet Nam	Chemical	Phosphate	Fish and other seafood	Fish
Cases of oral chemical burns in the Russian Federation linked to the consumption of domestically produced juice	23-May-2017	37	European Region	Russian Federation	Chemical	Unknown	Non-alcoholic beverages	Juice
Basil seeds from Viet Nam contaminated with <i>Salmonella</i> and distributed internationally	26-May-2017	18	Region of the Americas, Western Pacific Region	Canada, United States of America, Viet Nam	Biological	<i>Salmonella enterica</i> spp.	Legumes and pulses	Basil seeds

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 botulism in the Ukraine linked to the consumption of domestically produced dried eviscerated fish	30-May-2017	50	European Region	Ukraine	Biological	<i>Clostridium botulinum</i>	Fish and other seafood	Dried eviscerated fish
Infant formula produced in Singapore contaminated with <i>Cronobacter sakazakii</i> and distributed to Chile	09-Jun-2017	24	Region of the Americas, Western Pacific Region	Chile, Singapore	Biological	<i>Cronobacter sakazakii</i>	Foods for infants and small children	Infant formula
Chili peppers from Viet Nam contaminated with <i>Escherichia coli</i> and distributed to Canada	09-Jun-2017	1	Region of the Americas, Western Pacific Region	Canada, Viet Nam	Biological	<i>Escherichia coli</i>	Vegetables and vegetable products	Chili peppers
Coconut rolls produced in Thailand containing undeclared egg distributed to Canada	09-Jun-2017	17	Region of the Americas, South-East Asia Region, Western Pacific Region	Canada, Thailand, New Zealand	Undeclared allergen	Egg	Snacks, desserts and other foods	Coconut rolls
Raspberries from China contaminated with norovirus and distributed to Canada	23-Jun-2017	7	Region of the Americas, Western Pacific Region	Canada, China	Biological	Norovirus	Fruit and fruit products	Raspberries
Outbreak of aflatoxicosis in Tanzania linked to contaminated maize	05-Jul-2017	50	African Region	Tanzania	Chemical	Aflatoxins	Legumes and pulses	Maize
Outbreak of Salmonellosis in the USA linked to papayas imported from Mexico	26-Jul-2017	169	Region of the Americas	Mexico, United States of America	Biological	<i>Salmonella enterica</i> serotypes Agona, Gaminara, Kiambu, Senftenberg and Thompson	Fruit and fruit products	Papayas

EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Eggs, egg products and poultry products from several countries contaminated with fipronil and distributed internationally	03-Aug-2017	80	African Region, Region of the Americas, Eastern-Mediterranean, European Region, South-East Asia Region, Western Pacific Region	Afghanistan, Angola, Canada, Cape Verde, Congo, China (Hong Kong SAR), China (Taiwan), Equatorial Guinea, India, Iraq, Israel, Lebanon, Liberia, Maldives, Netherlands, Philippines, Qatar, Republic of Korea, Russian Federation, Saudi Arabia, Singapore, Sint Maarten, South Africa, Turkey, Ukraine, United Arab Emirates, United States of America	Chemical	Fipronil	Eggs and egg products	Eggs, eggs products and poultry
Outbreak of suspected foodborne illness in Hong Kong SAR (China) associated with the consumption of raw oysters from South Africa	05-Sep-2017	76	African Region, Western Pacific Region	China (Hong Kong SAR), South Africa	Unknown	Unknown	Fish and other seafood	Raw oysters
Frozen blueberries from the USA contaminated with <i>Listeria monocytogenes</i> distributed to Poland via Canada	03-Oct-2017	3	Region of the Americas, European Region	Canada, Poland	Biological	<i>Listeria monocytogenes</i>	Fruit and fruit products	Frozen blueberries
Cheese produced in Ireland contaminated with <i>Listeria monocytogenes</i> and distributed internationally	12-Oct-2017	32	Region of the Americas, European Region, Western Pacific Region	Australia, Austria, Belgium, China (Hong Kong SAR), France, Germany, Ireland, United Kingdom, United States of America	Biological	<i>Listeria monocytogenes</i>	Milk and dairy products	Cheese
Caviar produced in Germany potentially contaminated with <i>Clostridium botulinum</i> distributed to Canada	20-Oct-2017	35	Region of the Americas, European Region	Canada, Germany	Biological	<i>Clostridium botulinum</i>	Fish and other seafood	Caviar
Cheese produced in France contaminated with <i>Listeria monocytogenes</i> and distributed to Canada	25-Oct-2017	26	Region of the Americas, European Region	Canada, France	Biological	<i>Listeria monocytogenes</i>	Milk and dairy products	Cheese



EVENT	DATE	LENGTH (DAYS)	REGION(S) INVOLVED	MEMBER STATE(S) OR ASSOCIATE MEMBER(S) INVOLVED	HAZARD TYPE	SPECIFIC HAZARD	FOOD TYPE	SPECIFIC FOOD
Shrimp from Viet Nam containing undeclared egg and distributed to Canada	27-Oct-2017	86	Region of the Americas, Western Pacific Region	Canada, Viet Nam	Undeclared allergen	Egg	Fish and other seafood	Shrimp
Tuna produced in Colombia with high levels of mercury distributed nationally	04-Nov-2017	12	Region of the Americas	Colombia	Chemical	Mercury	Fish and other seafood	Tuna
Canned fish produced in China contaminated with nematodes and distributed to Peru	20-Nov-2017	29	Region of the Americas, Western Pacific Region	China, Peru	Biological	<i>Anisakis</i>	Fish and other seafood	Canned fish
Outbreak of salmonellosis in France linked to domestically produced infant formula distributed internationally	04-Dec-2017	125	African Region, Region of the Americas, Eastern-Mediterranean, European Region, South-East Asia Region, Western Pacific Region	Afghanistan, Algeria, Andorra, Angola, Armenia, Bahrain, Bangladesh, Belgium, Benin, Bulgaria, Burkina Faso, Burundi, Cambodia, Cameroon, Chad, China, China (Hong Kong SAR), China (Taiwan), Colombia, Comoros, Congo, Côte d'Ivoire, Cyprus, Czech Republic, Democratic Republic of the Congo, Djibouti, Egypt, Equatorial Guinea, the Former Yugoslav Republic of Macedonia, France, Gabon, Georgia, Greece, Guinea, Haiti, Iraq, Ireland, Kuwait, Lebanon, Libya, Madagascar, Mali, Mauritania, Monaco, Morocco, Netherlands, Niger, Nigeria, Norway, Pakistan, Paraguay, Peru, Qatar, Republic of Serbia, Romania, Rwanda, Saudi Arabia, Senegal, Seychelles, Sierra Leone, Singapore, Spain, Sri Lanka, Sudan, Switzerland, Syria, Togo, Tunisia, Turkey, Ukraine, United Arab Emirates, Venezuela, Viet Nam, Yemen, Zambia	Biological	<i>Salmonella enterica</i> Agona	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
Outbreak of listeriosis in South Africa linked to ready-to-eat meat products	08-Dec-2017	Ongoing	African Region	Angola, Botswana, Democratic Republic of the Congo (the), Ghana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Nigeria, South Africa, Swaziland, Uganda, Zambia, Zimbabwe	Biological	<i>Listeria monocytogenes</i>	Meat and meat products	Ready-to-eat meat
Wine produced in Australia possibly containing glass fragments exported internationally	08-Dec-2017	1	Western Pacific Region	Australia, Malaysia, Papua New Guinea, Sri Lanka	Physical	Glass	Alcoholic beverages	Wine
Infant formula recalled in Malaysia due to concerns over counterfeiting	14-Dec-2017	58	Western Pacific Region	Malaysia	Unknown	Unknown	Foods for infants and small children	Infant formula
Case of botulism in the Russian Federation linked to the consumption of commercially produced canned tomatoes	28-Dec-2017	10	European Region	Russian Federation	Biological	<i>Clostridium botulinum</i>	Vegetables and vegetable products	Canned tomatoes

## APPENDIX C – LINKS TO RECORDINGS OF INFOSAN WEBINARS

TECHNICAL WEBINAR SERIES I (CANADIAN SERIES - ENGLISH)	
Title of Webinar	Direct recording link
1. Foodborne Outbreak Investigations	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=e1dfd4839acd03160b441a2ac6382ac5">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=e1dfd4839acd03160b441a2ac6382ac5</a>
2. Canada's Food Safety Investigation Process	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=1ec2be602559804cf1029f1fe3e8a2c5">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=1ec2be602559804cf1029f1fe3e8a2c5</a>
3. Health Risk Assessment Process	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=f1fee1b219840f5ffb7f968691316aa6">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=f1fee1b219840f5ffb7f968691316aa6</a>
4. Canadian Food Recall System	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=3a96ebefe5db8bcb109fd8c78e7b2dcc">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=3a96ebefe5db8bcb109fd8c78e7b2dcc</a>
5. Canada's Outbreak Toolkit	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=c19c4928435309ce27091afd0e6dee2">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=c19c4928435309ce27091afd0e6dee2</a>
6. Foodbook - The Canadian Food, Water and Animal Exposure Study	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=ba65049de0622d9a3b56afa074e89ae1">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=ba65049de0622d9a3b56afa074e89ae1</a>
7. Canada's Foodborne Disease Surveillance Systems	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=fee1264938b330a54186a7374f01dc15">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=fee1264938b330a54186a7374f01dc15</a>
8. Canada's New Recall Notification Protocol	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=9db844520d913e7d9ec0fe421a1a0d74">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=9db844520d913e7d9ec0fe421a1a0d74</a>

TECHNICAL WEBINAR SERIES I (CANADIAN SERIES - FRENCH)	
Title of Webinar	Direct recording link
1. Les enquêtes sur les éclosions de maladies d'origine alimentaire	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=6eada44042ee02c783e3e61f22a54925">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=6eada44042ee02c783e3e61f22a54925</a>
2. Le processus d'enquête de salubrité des aliments au Canada	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=d6dbf1721a2391a514c2c6dae376740b">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=d6dbf1721a2391a514c2c6dae376740b</a>
3. Le processus d'évaluation des risques pour la santé au Canada	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=d35cb4e13c60c45943986e2fc82527c7">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=d35cb4e13c60c45943986e2fc82527c7</a>
4. Le processus de rappel d'aliments au Canada	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=d208c658f5b4e1fa99ce4554ff277b64">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=d208c658f5b4e1fa99ce4554ff277b64</a>
5. La trousse d'outils en cas d'éclosion	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=dc371e6f457d46a25d8e4f142e8d4091">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=dc371e6f457d46a25d8e4f142e8d4091</a>
6. Foodbook	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=83f2bf114d7a30f4479b204460d7b506">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=83f2bf114d7a30f4479b204460d7b506</a>
7. Nouveau protocole de notification des rappels de l'ACIA	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=18af13f3a44c294f0ba9894304a3c85c">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=18af13f3a44c294f0ba9894304a3c85c</a>
8. Surveillance des maladies d'origine alimentaire au Canada	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=c894233157a270fecde720b5707c6761">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=c894233157a270fecde720b5707c6761</a>

TECHNICAL WEBINAR SERIES II (AMERICAN SERIES - ENGLISH)	
Title of Webinar	Direct recording link
1. Using Whole Genome Sequencing to Source Foodborne Outbreaks	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=e60fced645113c2fafa33bd236128ac7">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=e60fced645113c2fafa33bd236128ac7</a>
2. US FDA Coordinated Outbreak Response and Evaluation (CORE) Network	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=c8e27923bdf175a02f17d08b193e2f1e">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=c8e27923bdf175a02f17d08b193e2f1e</a>
3. Partnerships in Action	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=f11089de104a9a82c5263d47962f3477">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=f11089de104a9a82c5263d47962f3477</a>
4. Better decision-making with FDA-iRISK®	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=7c6fb513bb152d5737e5bd2b2d8a27e2">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=7c6fb513bb152d5737e5bd2b2d8a27e2</a>
5. US FDA's Strategic Coordinated Oversight of Recall Execution (SCORE)	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=3722bb79cd723f90602a8a3943742a6d">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=3722bb79cd723f90602a8a3943742a6d</a>
6. Intentional Adulteration Rule under the Food Safety Modernization Act (FSMA)	<a href="https://who-meeting.webex.com/who-meeting/jdr.php?RCID=f717d57529f052e212da36f23d9c18ec">https://who-meeting.webex.com/who-meeting/jdr.php?RCID=f717d57529f052e212da36f23d9c18ec</a>

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[http://www.who.int/foodsafety/areas\\_work/infosan/en/](http://www.who.int/foodsafety/areas_work/infosan/en/)



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