



FAO RAP, Bangkok, Thailand

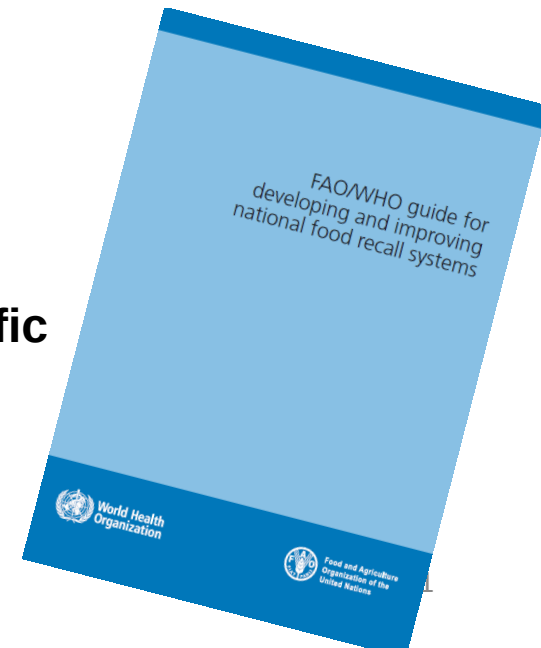
TECHNICAL TRAINING ON RISK ANALYSIS FOR SAARC COUNTRIES
Delhi, India, June 17-21, 2013



Quality Council of India

FAO/WHO Guide for developing and improving national food recall systems

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Coverage

1. Background and importance of food recalls
2. Salient features of the FAO/WHO Guide for developing & improving national food recall systems

Food Safety & Product Recalls - Some Examples

E.Coli contaminated spinach recall...

San Francisco Chronicle

Fresh spinach recall after E. coli outbreak A major California grower is linked to a virulent strain of bacteria that has killed one person and sickened 94 others across 20 states

Steph Fie, Chronicle Staff Writer
Saturday, September 16, 2009

A California grower has voluntarily pulled all of its prepackaged fresh spinach off the shelves after the product was linked to a potent strain of E. coli bacteria that by Friday had



An advertisement for Air New Zealand. It features the Air New Zealand logo at the top, followed by the text 'Fly to New Zealand from \$1056*'. Below this, it says '*Restrictions, taxes, and fees apply'. At the bottom, it says 'For the best deals, book now at airnewzealand.com' and '100% PURE NEW ZEALAND www.newzealand.com'. To the left of the main text is a 'Top Autos' logo with the text 'From German Audi'.

Then it spread to lettuce

The CNN.com website header. It includes the CNN logo, a search bar, and navigation links for 'AMERICAN MORNING', 'SITUATION ROOM', 'LOU DOBBS TONIGHT', 'PAULA ZAHN NOW', 'LARRY KING LIVE', and 'ANGERS'. Below the search bar are links for 'Home', 'World', 'U.S.', 'Weather', 'Business', 'Sports', 'Analysis', 'Politics', 'Law', 'Tech', 'Science', 'Health', 'Entertainment', 'Offbeat', and 'Travel'. The 'Health' link is highlighted in red.

Lettuce company retrieves nearly all suspect greens

POSTED: 8:33 p.m. EDT, October 9, 2006



SAN FRANCISCO, California (AP) — The company that recalled its lettuce after irrigation water tested positive for E. coli scrambled Monday to locate 250 remaining cartons of the greens, which could be scattered across seven Western states.

On Sunday, Nunes Co. recalled more than 8,500 cartons of green leaf lettuce grown on one farm in the Salinas Valley, the agricultural heartland of the center of the

China Milk Recall

A screenshot of the BBC News website. The main headline is 'Mass recall of China milk produce'. The article text says: 'Shop shelves in China and elsewhere are being cleared of popular dairy products after tests found contamination in regular milk as well as baby formula. Inspectors found that 10% of liquid milk from three of China's dairies was tainted with melamine. Singapore banned the import and sale of all Chinese milk products after some were removed from stores in Hong Kong. The scandal first came to light in milk powder that killed four infants and sickened more than 6,000 others. Suppliers are suspected of diluting milk to cut costs, then adding melamine to make it appear higher in protein.' There is a small image of a milk can and a quote from a customer: 'Customers are returning suspect milk products following the scandal'. At the bottom, there is a link to 'FOR THE GOOD OF TOMORROW'.

A screenshot of the BBC News website. The main headline is 'Two face death over Chinese milk'. The article text says: 'Two men have been given the death penalty for their involvement in China's contaminated milk scandal. The former boss of the Sanlu dairy at the centre of the scandal was given life imprisonment. They are among 21 sentences being handed down by the court in northern China, where Sanlu is based. The scandal, in which melamine was added to raw milk to make it appear higher in protein, led to the deaths of six babies and made some 300,000 ill. It caused outrage in China and has tainted the image of the country's food industry both at home and abroad.' There is a small image of a woman in a yellow vest speaking at a microphone. To the right, there is a section titled 'CHINA'S TAINTED MILK' with 'KEY NEWS STORIES' and 'FEATURES AND ANALYSIS'.

Some recent food safety examples 1/2

- **Melamine** Contamination of Infant Formula in 2008
- **E.coli O104:H4** (in 2011) in northern Germany
 - serious outbreak of foodborne illness (characterized by bloody diarrhoea, serious complications)
- **Dioxin** contaminated Irish pork in 2008
- **radionuclide** contamination of food items from Japan
- **Pesticide residues** found by EU in vegetable consignments from Thailand in 2009-11

Some food safety examples Sudan Red 2/2



- In May 2003, European Authority reported finding Sudan I in ground capsicums produced in India (levels of 4,000 ppm)
- Led to ~600 food product recalls in UK
- mandatory sampling and testing program for Sudan I in all chilli/ chilli products exported from India put in place on October 23, 2003
- Sudan I **detected in Worcester sauce produced in the UK in 2005** (contaminated chili powder exported to EU from India in 2002)
- Product recall in 2005 - **may take years before it can take place.**

Data of Published Worldwide Food Product Recalls (US)

Year Recalls

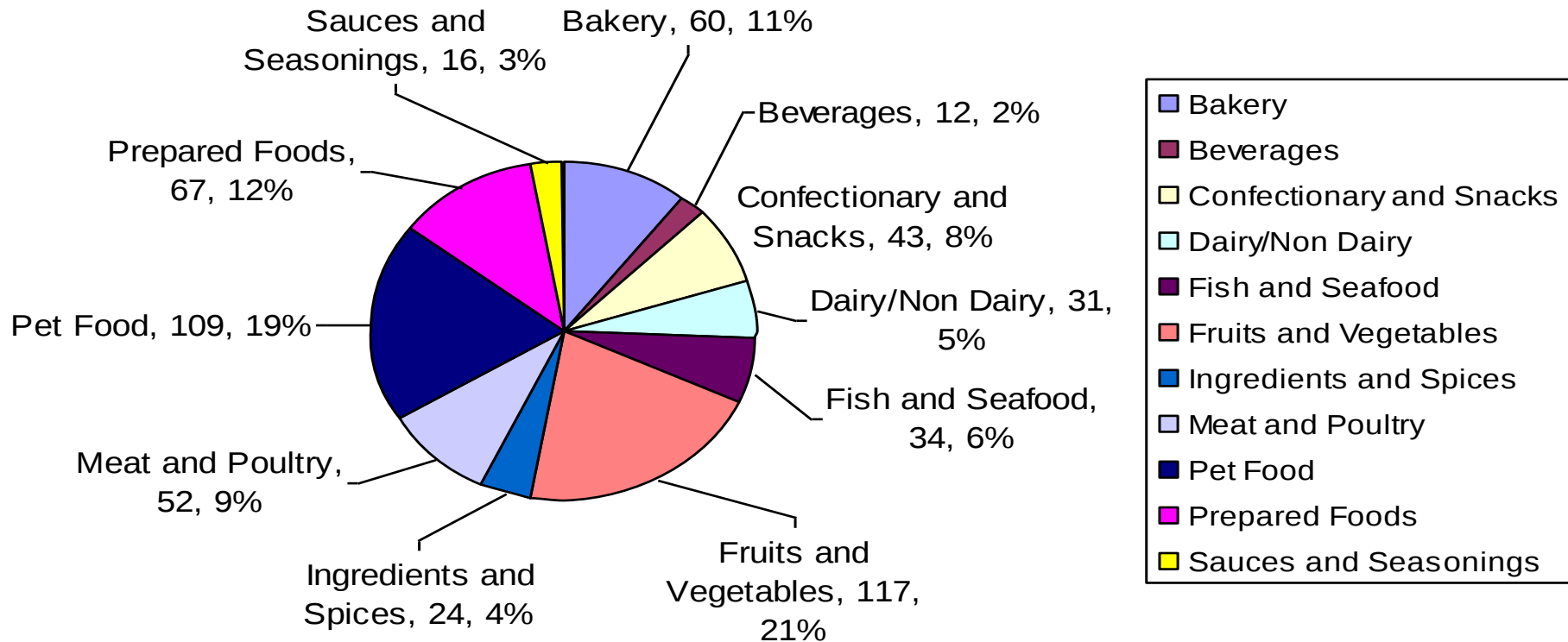
- **1999** **279**
- **2000** **384**
- **2001** **393**
- **2002** **396**
- **2003** **266**

Year Recalls

- **2004** **293**
- **2005** **255**
- **2006** **240**
- **2007** **338**
- **2008** **565**

Recalled Food Products (565 products)

Product Categories Affected by Recalls-2008



As compared to 2007, recalls due to:

- Salmonella, ↑ by 800%
- Listeria, ↑ by 20%
- E. Coli, ↓ by 22%
- Undeclared ingredients ↑ by 16%

A snapshot of recent recalls in US

- Listeria and Salmonella contamination continues to be the main causes of recall even during 2013
- Jan 25, 2013 [Michigan Retail Store Recalls Ground Beef Products Due To Possible Salmonella Contamination](#)
- Jan 26, 2013 [Oklahoma Firm Recalls Chicken Fried Chicken Breasts That May Contain Foreign Materials](#)
- Jan 26, 2013 [Whole Foods Market Recall Whole Catch Wild Alaskan Sockeye Salmon Because of Possible Health Risk from Listeria](#)
- Jan 29, 2013 [Sprouter Northwest Recalls Alfafa, Brocco Sandwich Sprouts, Clover, Spicy Sprouts Because of Possible Health Risk](#)
- Jan 29, 2013 [New Mexico Firm Recalls Beef Jerky Products Due to Misbranding and An Undeclared Allergen](#)
- Jan 30, 2013 [Whole Foods Market Expands Its recall from 18 states of Whole Catch Wild Alaskan Sockeye Salmon Because of Possible Health Risk From Listeria](#)
- Jan 31, 2013 [California Firm Recalls Veal Trimmings Due to Possible E. coli O157:H7 Contamination](#)
- Feb 1, 2013 [Texas Firm Recalls Chicken and Pork Tamale Products Due to Misbranding and Undeclared Allergens](#)
- Feb 2, 2013 [Whole Foods Market Voluntarily Recalls Prepared Food Items Made with Circle Sea Salmon Lox Trim in Two States Due to Possible Health Risk](#)
- Feb 3, 2013 [Wisconsin Firm Recalls Liver Paté Due to Misbranding and An Undeclared Allergen, sodium caseinate](#)

Introduction

Background

- Food recall systems for unsafe food have been evolving during the last few years



FAO/WHO Guide for developing and improving national food recall systems

1. Introduction – purpose, target audience, scope
2. Terminologies
3. Preliminary steps for developing and/or improving national food recall systems
4. National food recall systems (Elements, Traceability, Data collection & exchange systems)
5. Setting up & operating a national food recall system
6. Food recall management
 - 6.1 Elements of food recall management
 - 6.2 Example of food recall workflow
7. Conclusion

Purpose

Support countries in establishing and implementing effective national food recall system to respond to food safety events or emergencies through best practices based on country experiences/ experts

Target Audience

- Primary - CAs/ national authorities working on food safety
- Other organizations engaged in food safety, including private sector
- Countries in process of developing national food control systems

Scope

Best practice/ guidance on how to:

➤ develop, review & implement

effective national food recall systems as a key management option in the response to food safety events or emergencies

2. Terminologies relevant to food recall & traceability

- **Food recall**
- **Food recall plan**
- **National food recall system**
- Food Business Operator
- Competent authority
- **Traceability or product tracing**

Food Recall

“The action to remove food from the market at any stage of the food chain, including that possessed by consumers”

It is a is a fundamental tool in the management of risks in response to food safety events and emergencies.

Withdrawal

- Retrieval of a food item that did not reach consumers, OR retrieval of a food item because of reasons unrelated to safety (e.g. quality).
- Retrieval of a food item by FBOs, in contrast to an action taken by the national authority. To avoid confusion, the guide uses the term recall rather than withdrawal

Food Recall Plan

“The **procedures and arrangements** that a **food business operator** may have in place to retrieve food and food products from the food chain if a problem arises.”

National food recall System

“The **system/framework** that **national governments** put in place for effective food recalls.” The system/framework may include the legislative framework, guidance, training, communication mechanisms, record-keeping, evaluation, etc.

Traceability or product tracing

The ability to follow the movement of a food through specified stage(s) of production, processing and distribution.

Purpose of a food recall

- To protect public health, by ensuring that
 - there is rapid removal of unsafe food from all possible stages of the supply chain
 - The concerned consumers and customers are informed; and
 - The food under recall has been retrieved, destroyed or reprocessed.
- Also
 - Ensure compliance with legal requirements
 - Protect company assets including brand reputation

Common causes of food recalls

- Microbiological results beyond the acceptable limits,
- foreign matter presence - glass, needles and metal fragments
- chemical contamination
- Radio nuclear materials (radioactive chemicals when present at unacceptable levels)
- labeling errors and
- tampering of products

3. Preliminary steps for developing and/or improving national food recall systems

Preliminary steps for developing and/or improving national food recall systems

- Step 1. Understanding the importance of shared responsibilities
- Step 2. Review of the current national food recall system
- Step 3. Consideration of general issues
- Step 4. Consideration of country-specific issues

Step 1. Understanding the importance of shared responsibilities

- Shared responsibility between the government/ CA and the food industry
- Acting decisively & rapidly
 - remove unsafe food from market
 - inform consumers of problem if unsafe food reaches them
- Effective national food recall systems
 - FBO take action under guidance & oversight of CA;
 - CA to consult with industry during development
- Benefit – public health protected, reputation of FBO intact, confidence in food supply

Competent authority's responsibilities

- Providing oversight; advising/ monitoring/ enforcing/ coordinating actions (among all FBOs and collaborating with other national authorities involved in the recall)
- Assisting & guiding the FBO to perform the recall
- Communicating with stakeholders, including consumer organizations, relevant international bodies and CAs in other countries

Step 2. Review of the current national food recall system

Key elements (8)

- a legal framework enabling **powers** of CA
- clearly assigned **roles & responsibilities** (FBO & CA)
- capability for **effective & timely RM decision-making**
- provision/availability of **guidance/training materials**
- an effective mechanism for **information exchange** among implementing partners
- procedures for **communication** (media & consumers)
- procedures for **documentation & record-keeping**
- effective mechanisms for **verification & evaluation**

Step 3. Consideration of general issues

- multi-sectoral & interagency coordination mechanism at a national level
- Clearly defined r&r for partners/agencies -tiered approach
- Recall terminology clearly defined (consistent/ uniform)
- A food recall is one RM option used - be consider within context of national food control system
- Applied in different situations (**safety, non-compliance, suitability**)
- Wide variation in the complexity of food chain (simple processing/marketing chain - lengthy intricate system)
- International collaboration & exchange of information

Step 4. Consideration of country-specific issues

- Government structure
- Organization & capability
- Level of development of sectors within food chain
- Country's import/export situation (requirements for recall of products from importing/exporting firms in their food recall plan)
- Consideration to SLDBs businesses including street food vendors & market stalls
- Resources - limited

4. National food recall systems

4.1 Elements

4.2 Traceability

4.3 data Collection & Exchange

Elements of national food recall systems (4.1)

- Legal framework
- Powers of the CA
- Clearly defined roles & responsibilities of Government/CA, Industry/FBO & International network (INFOSAN)
- Effective communication & notification
- Accurate record-keeping
- Guidance materials & training
- Review of national food recall systems

Legal Framework - Provisions

- FBOs to have food recall plan and test it periodically;
- CA empowered to enforce recalls;
- FBOs to have traceability systems in place (“one-step-back & one-step-forward”); except when sold directly to consumers (1 step backwards only)
- FBOs to notify CA if the food supplied is unsafe;
- FBOs/ CA to inform consumers about health hazards of the specific unsafe food.

Powers of the CA

- Compel FBOs to undertake a recall.
- Supervise FBOs undertake a food recall
- Legal actions if violation of provisions (detain & seize unsafe food)
- Investigate origin & destination of incriminated food
- Communicate with business operators & general public
- Powers to inspect FBOs - routine inspection/audit to verify documentation(recall plan/ traceability system)

Roles and Responsibilities - CA 1/2

- Establish an effective national food recall system;
- Initiate recall of unsafe food & require FBOs to remove unsafe food from market;
- Engage with FBOs to develop guidance (on establishing, implementing & maintaining food recall plans & traceability;
- Provide advice to FBOs on the assessment of risk & appropriate RM actions;
- Provide mechanism to allow FBOs to notify CA in case of supply of unsafe foods;
- Assist FBOs in undertaking recall;
- Verify effectiveness of the recall;

Roles and Responsibilities - CA 2/2

- Provide a mechanism to allow FBOs to report on progress of recall;
- Cooperate with other government agencies (national/international);
- Conduct ongoing investigation, to identify other implicated foods;
- Order and enforce a recall if FBO fails to do so;
- Ensure that consumers informed & concerns managed;
- Seize/order destruction, re-processing/re-conditioning/alternative use of recalled food;
- Work with FBOs to ensure appropriate actions;
- Notify relevant authorities if unsafe food exported.

Roles & Responsibilities - FBOs

- establish and maintain a **food recall plan**;
- maintain **records** of sourcing & supplying food to;
- establish procedures for verification (traceability/recall);
- **train staff** to execute food recall plan;
- **remove unsafe food rapidly** from market;
- **Inform consumers** concerned, of the food under recall;
- **notify & cooperate with CA** for undertaking recall;
- notify other relevant FBOs within the food chain;
- **communicate** recall details & information to relevant parties & respond to media/ consumer queries;
- **manage recalled product** (disposal/ reprocess);
- **Evaluate regularly & revise** as necessary

Information & Communication Networks

- **INFOSAN**, global network managed by FAO/WHO used to share information rapidly with CAs
helps both government & industry to recall contaminated food distributed internationally.
Provides an important platform for the rapid exchange of information in the case of international food safety events & for emerging food safety issues.
If a food subjected to a recall enters international trade, the CA to establish early contact with INFOSAN to facilitate sharing of information with international counterparts
- **EU Rapid Alert System for Food and Feed (RASFF)**
- **ASEAN rapid alert (ARASFF)**

Effective Communication & Notification

CA :

- A single designated point of contact (internet-based, phone number or email address)
- CA to communicate with other agencies – optimise resources & ensure effectiveness
- Risk communication to explain the nature of the problem and its impact on consumer health

FBO :

- The exchange of information with all stakeholders, including CA, other key government agencies, the media, consumers & other relevant FBOs

Accurate Record-keeping

- **Recall activities & correspondence** to be documented accurately & maintained by both FBOs & CA
- The CA may conduct an inspection or audit to verify documentation & records (removal, tracing & disposal of recalled food).

Records important in legal proceedings/ insurance investigations

Guidance Material & Training

For development of robust food recall plan (by CA):

- clear definitions of essential terms;
- describe the process of a food recall;
- clearly define roles & responsibilities in a recall, & train staff;
- implement a documented traceability system;
- be aware of legal requirements;
- communication process to inform CA, other FBOs & consumers;
- clearly define the obligations for notification & its process;
- have in place a verification process for recall effectiveness & management of products being recalled;
- implement a review process.

Review of National Recall Systems

- National Recall system & FBO recall plan
- Reviewed on a regular basis (e.g. every few years).
- Independent party contracted or by questionnaire & based on results may revise
- A joint review of recall plan in collaboration with FBO after an emergency & based on this revise recall plan by FBO

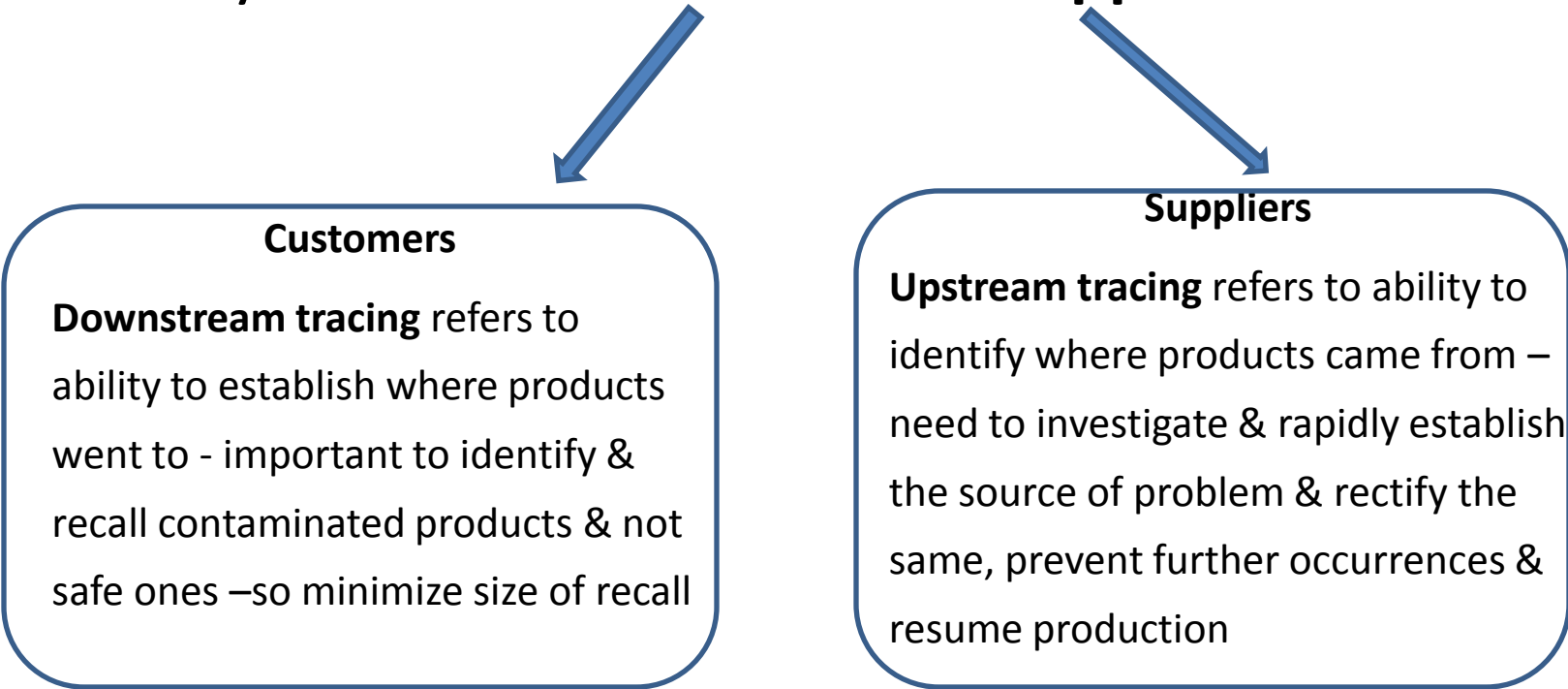
4.2 Traceability

- A traceability system is an **effective tool** with which FBOs can trace food throughout the food chain.
- A **most common legal requirement** is for FBOs to have, a documented one-step-back & forward traceability. Simple based on purchase/sale records.
- Having **accurate T information** is cost-effective, as entire lot may not be recalled if only one batch is affected
- With the “one step forward & backward” concept, it is possible to have **information of product flow in the entire food chain**

Traceability - Important Concepts

❑ Traceability refers to “one step forward” & “one step backwards” approach to

➤ Identify immediate **customers & suppliers**



Customers

Downstream tracing refers to ability to establish where products went to - important to identify & recall contaminated products & not safe ones –so minimize size of recall

Suppliers

Upstream tracing refers to ability to identify where products came from – need to investigate & rapidly establish the source of problem & rectify the same, prevent further occurrences & resume production

Objectives of traceability in the context of a food recall

- **Identify uniquely a lot/batch/consignment** of food in a way that allows tracing of the physical flow of the food forwards through the food chain to the immediate customer and tracing of the physical flow of raw materials backwards to the immediate supplier
- Create and maintain accurate **traceability records** that can be provided within a short time period when needed for recall or at the request of the competent authorities.

4.3 Data collection/ exchange systems

- CA to establish mechanism to collect food recall information
- Information to be analysed and exchanged with relevant parties including national/ regional/ international organizations and networks

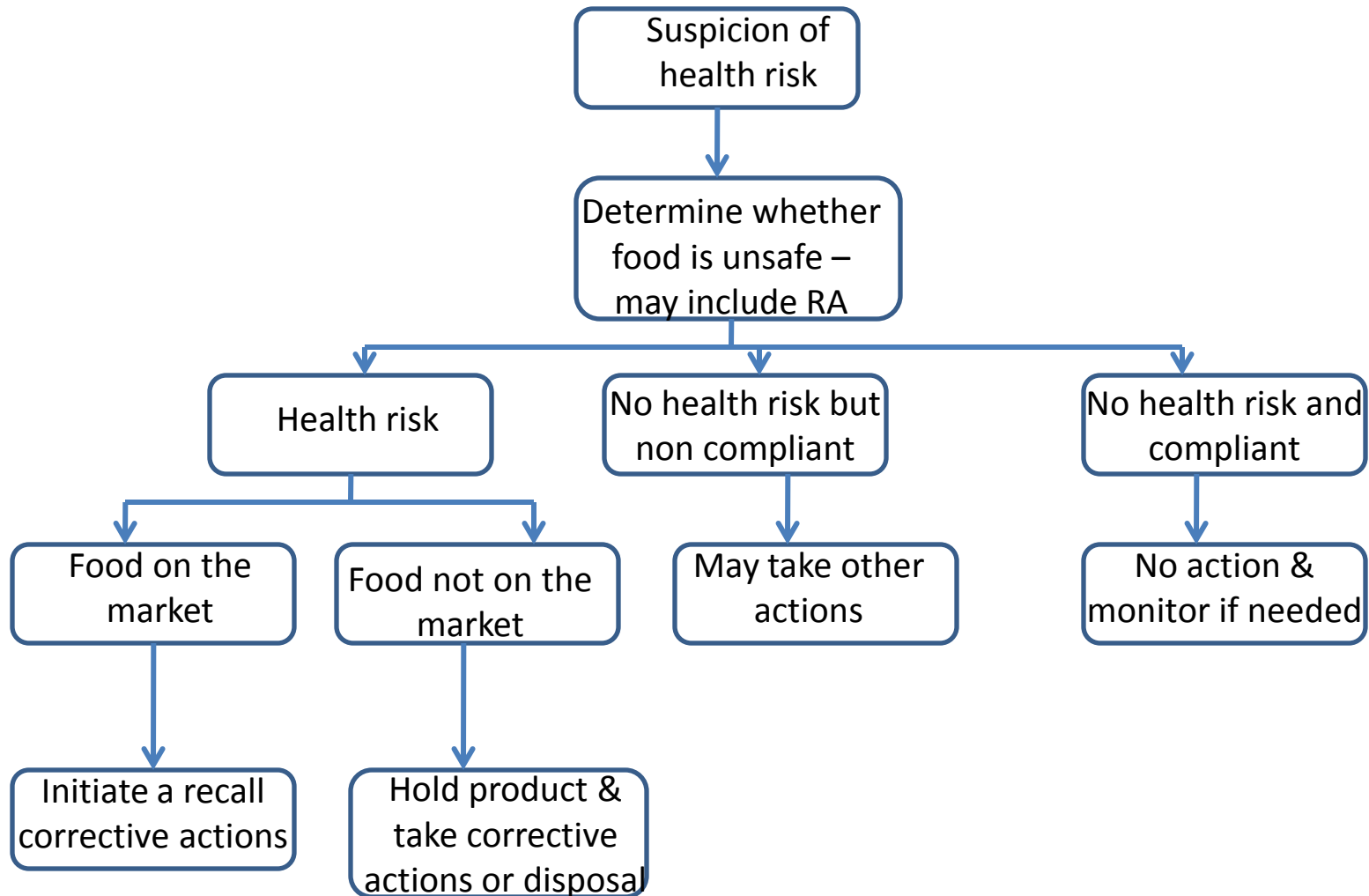
5. Setting up & operating a national food recall system

5. Setting up & operating a national food recall system

Actions prior to a food recall & initiation of recall

- Decision for food recall can be initiated by FBO or CA (information from own department/government, other govts, consumer)
- The way in which the CA enforces a specific recall depends on the assessment of risk (severity of risk, distribution of product)
- Prior to a food recall that is not initiated by a FBO, CA often needs to conduct some activities:
 - Identify food safety events through the different sources
 - Initiate investigations of food safety events
 - Conduct a rapid risk assessment.
 - Attribute the food safety event to a food.
 - Decide on the appropriate RM options (recall?)

Example of a recall action decision tree



6. Food recall management

6.1 Elements of food recall management

- CA leads coordination activity & multiagency approach
- Interaction between CA & the recalling FBO (communication, monitoring)
- International dimension – dynamic, types of information
- Communication to the public
- Documentation of recall events/related activities

6.2 Example of food recall workflow

Initial communication with relevant partners (government & industry) – format/ template



Initiation & implementation of food recall across the food chain – forward & backward



Monitoring & documentation of the recall (verification also)



Verification of retrieval, correction or disposal of affected food items



Providing consumer advice (industry/ govt actions)



Monitoring actions to prevent the recurrence of unsafe products – check controls, increase audits, monitor consumer complaints



General evaluation of the recall

Consumer advice

- Primary **purpose** of risk communication to consumers by CA is to protect public health & warn public not to consume affected product
- **Advice** to the public should be clear, concise, simple & factual, & may include following:
 - why the recall is taking place
 - what has to be recalled, including a written description and/or photographs of the product
 - what should consumers do if food has been consumed
 - what consumers should do with the affected food in their possession
 - contact details for further information
 - brief information on the hazard involved, the incubation period, typical symptoms, etc.

Methods for providing consumer advice

- Communication to the public can involve:
 - General press releases to media
 - Internet announcements on Web site of CA
 - Internet site or other social media used by FBOs
 - Public warnings on TV, radio, newspapers
 - Consumer advocacy organizations (e.g. allergen networks/associations)
 - In-store or point-of-sale notification

Monitoring actions to prevent the recurrence of unsafe products

- **Actions by FBOs**/ identify sources of hazards & corrective actions:
 - Improved controls of and/or stricter requirements for supplies/suppliers
 - Improved GHP (e.g. improving facilities, hygiene of personnel, pest control, sanitation)
 - Improved monitoring procedures and/or control of food hazards through use of systems such as HACCP
 - Raised hygiene standards for final products
 - Careful review &, if necessary, adaptation of the whole production process

Surveillance programmes & monitoring scheme

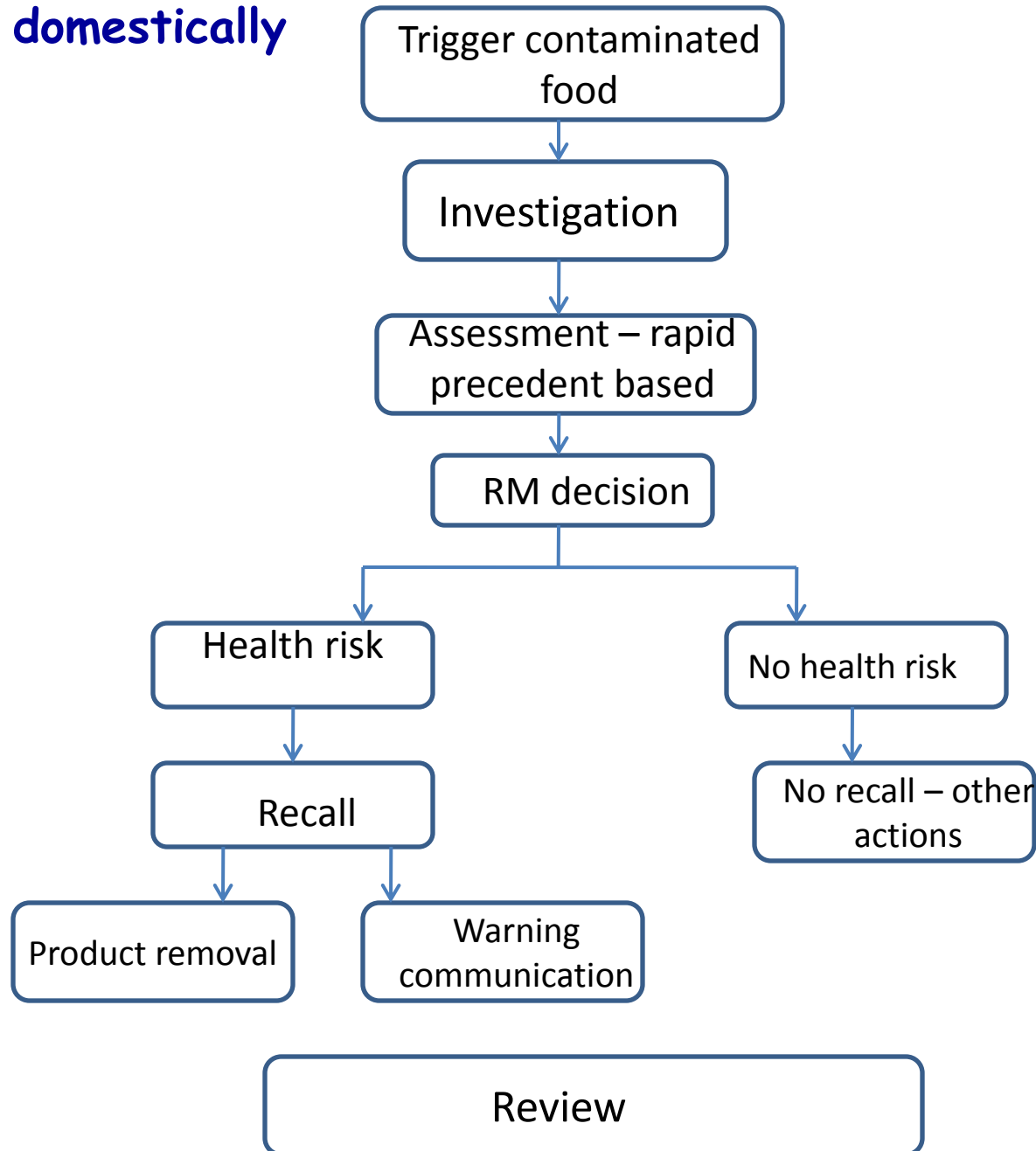
Actions by CA

- Risk-based audits
- Risk-based inspections
- Sampling programmes that focus on high-risk foods
- Reassessing existing food safety programmes
- Improving surveillance programmes
- Monitoring consumer complaints

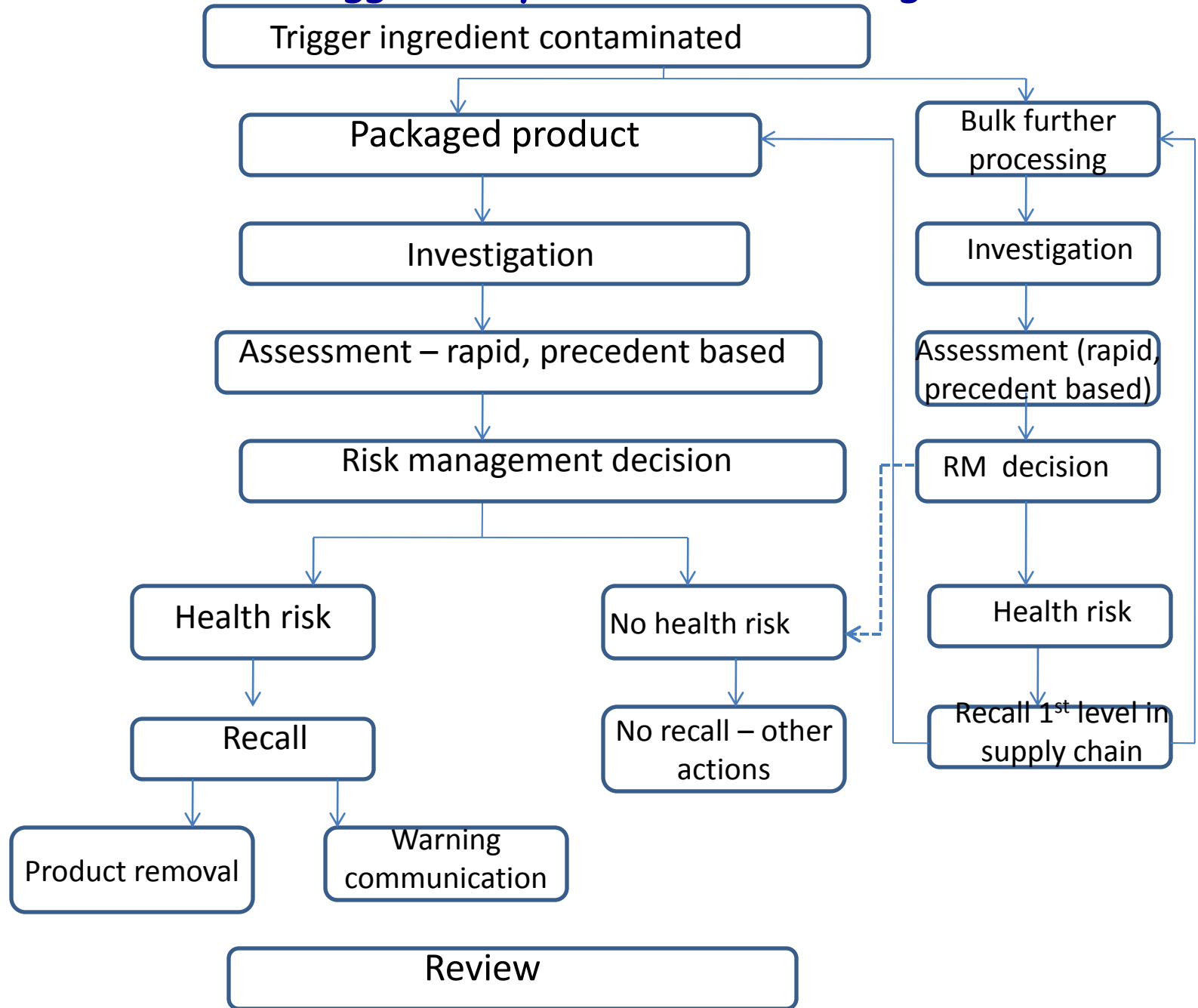
Recall episodes- Some scenarios

- Scenario 1: A simple recall scenario triggered by a contaminated food
- Scenario 2: Event triggered by a contaminated ingredient
- Scenario 3: Event triggered by an outbreak of food-borne disease
- Scenario 4: Event triggered by an international source

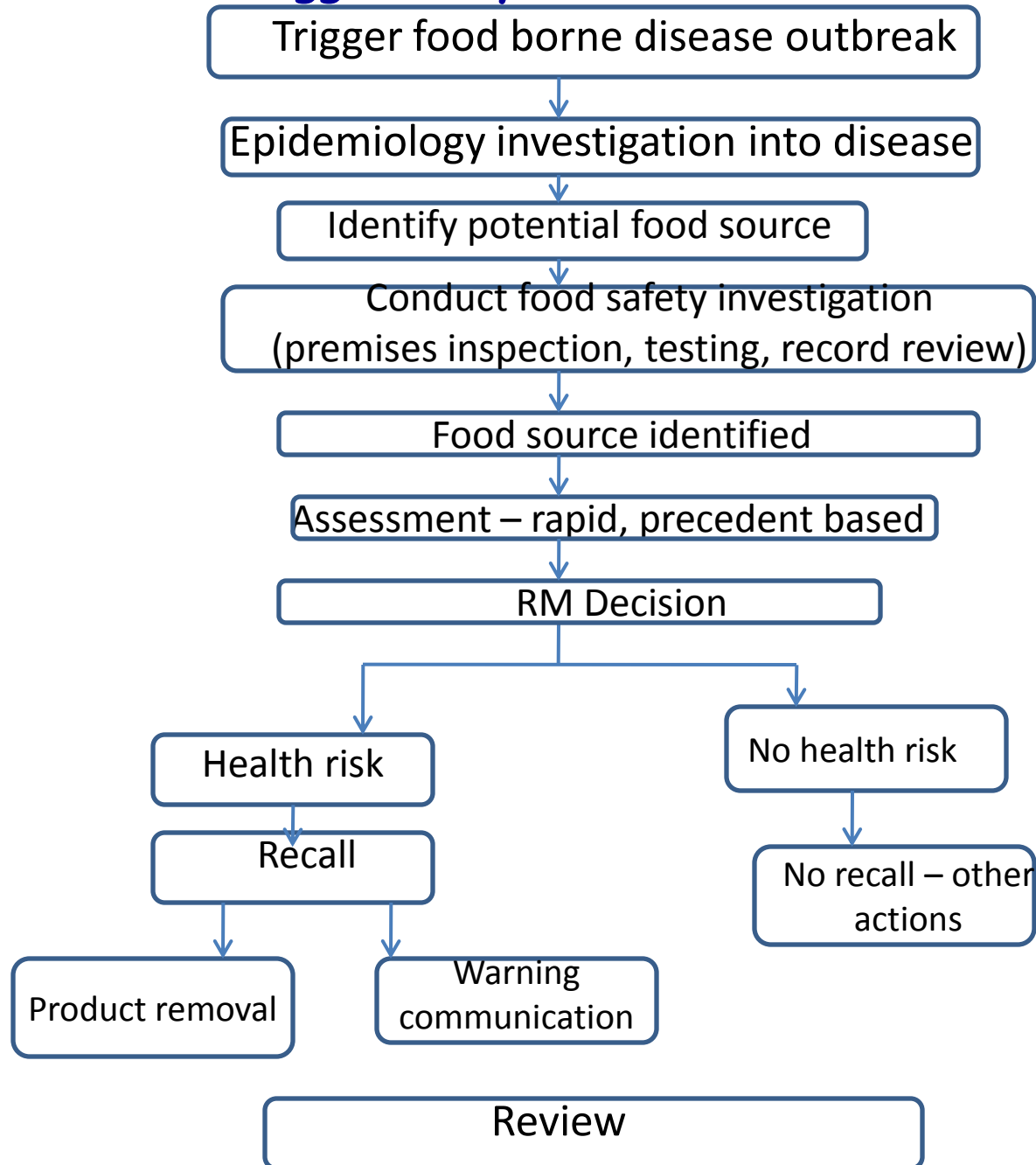
Scenario 1: A simple recall scenario triggered by a contaminated food produced domestically



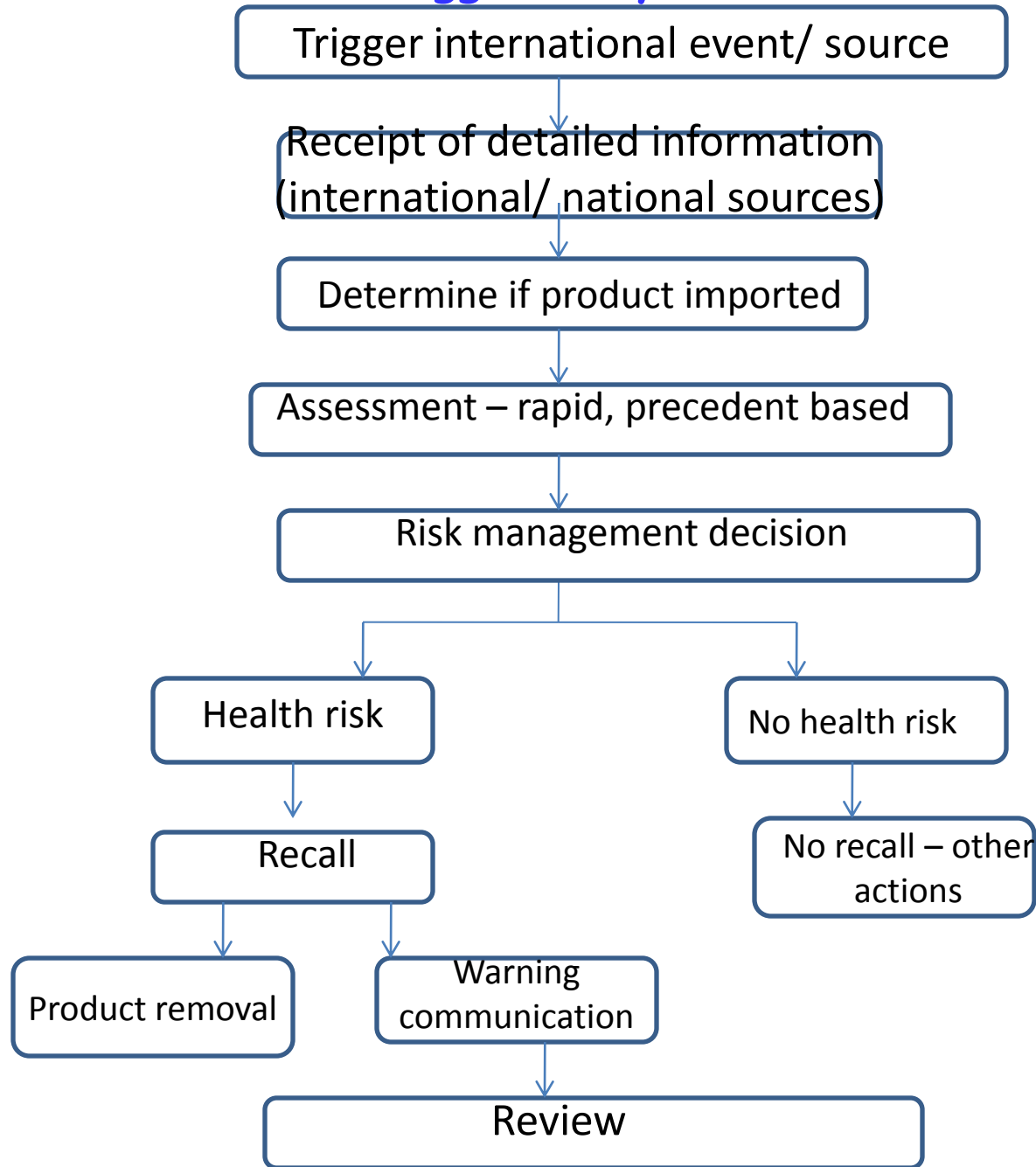
Scenario 2: Event triggered by a contaminated ingredient



Scenario 3: Event triggered by an outbreak of food-borne disease



Scenario 4: Event triggered by an international source



7. Conclusions

- Food recall an important RM option
- Also prevent escalation of food safety events to emergencies
- Legal framework important
- Coordination with government & cooperation with FBOs
- Resource intensive so need to consider the purpose & benefits – food safety, confidence in product, reputation of country, future market access
- Traceability important (may be simple one)

Useful Web Sites

- <http://www.fao.org> ; <http://www.fao.org/food/food-safety-quality/home-page/en/>
- **Fao RAP** <http://www.fao.org/asiapacific/en>
- <http://www.who.int/foodsafety/en/> (Food Safety, World Health Organization)
- <http://www.who.int/csr/delibepidemics/en/> (Epidemic and Pandemic Alert and Response, WorldHealth Organization)
- <http://www.who.int/disasters> (Emergency and Humanitarian Action, World Health Organization)
- <http://www.cfsan.fda.gov/~dms/fsterr.html> (Food and Drug Administration, Center for Food Safety and Applied Nutrition, USA)
- <http://www.foodsafety.gov/~fsg/bioterr.html> (Food and Drug Administration, Center for Food Safety and Applied Nutrition, USA)
- <http://www.inspection.gc.ca/english/fssa/secur/secure.shtml> (Canadian Food Inspection Agency)
- [http://www.fsis.usda.gov/Food_Defense_&_Emergency_Response/FSIS_Security_Guidelines_f or Food_Processors/index.asp](http://www.fsis.usda.gov/Food_Defense_&_Emergency_Response/FSIS_Security_Guidelines_f%20Food_Processors/index.asp) (Food Safety and Inspection Service, USDA)
- <http://www.ipfsaph.org/En/default.jsp> (International Portal on Food Safety, Animal and Plant Health)
- http://ec.europa.eu/food/food/rapidalert/index_en.htm (European Union Rapid Alert System for Food and Feed)

THANK YOU

