



FAO RAP, Bangkok, Thailand

# TECHNICAL TRAINING ON RISK ANALYSIS FOR SAARC COUNTRIES

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# Food Safety Emergency Response Planning

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# Food Safety Emergency?

Codex Alimentarius definition :

A food safety emergency is a situation whether accidental or intentional, that is identified, by a CA as constituting a serious and as yet uncontrolled foodborne risk to public health that requires urgent action.

Codex Alimentarius, document CACGL-19

# Emergency, Incident and Event?

	Definitions:
<b>Food Standards Agency of the UK (2009):</b> <i>an incident</i>	Any event there are concerns about <i>actual or suspected threats</i> to the safety and quality of food, <i>require intervention to protect consumers</i>
<b>US FDA (2005):</b> <i>an emergency</i>	An <i>unforeseen</i> combination of <i>circumstances</i> that calls for <i>immediate actions</i>
<b>AUS – National Food incident Response control (2007):</b> <i>a food incident</i>	Any situation where is a <i>risk, potential risk or perceived risk of illness or confirmed illness</i> associated with the consumption of food
<b>Public Health Emergency of International Concern (PHEIC)</b> (under IHR, 2005)	An event which includes the following four criteria: 1) <i>Seriousness of public health impact</i> 2) <i>Unusual or unexpected nature of the event</i> 3) <i>Potential</i> for the event <i>to spread internationally</i> 4) The risk that <i>travel or trade restrictions</i> may result from the event

# Emergency, Incident and Event?

## Definitions:

### Bangladesh

a situation arising from intentional or unintentional contamination of food with biological, chemical, radio-nuclear or physical hazards that is identified, by a CA as constituting an uncontrolled food borne risk to public health, economy and trade that requires urgent action

### Thailand

“any event of food safety, whether accidental or intentional, caused by chemical, biological & physical hazards of food , that is serious & unable to be controlled in normal food control system, risk & impact to life, public health, trade, economic and politic, both national & international level, that requires urgent action & multi-agency coordination approach from involved food safety agencies”

### Japan

*A situation where there is/may be significant foodborne risk to public health that requires urgent action to ensure the food safety .*

*Specifically, the incident causes large-scale and/or wide spread damage.*

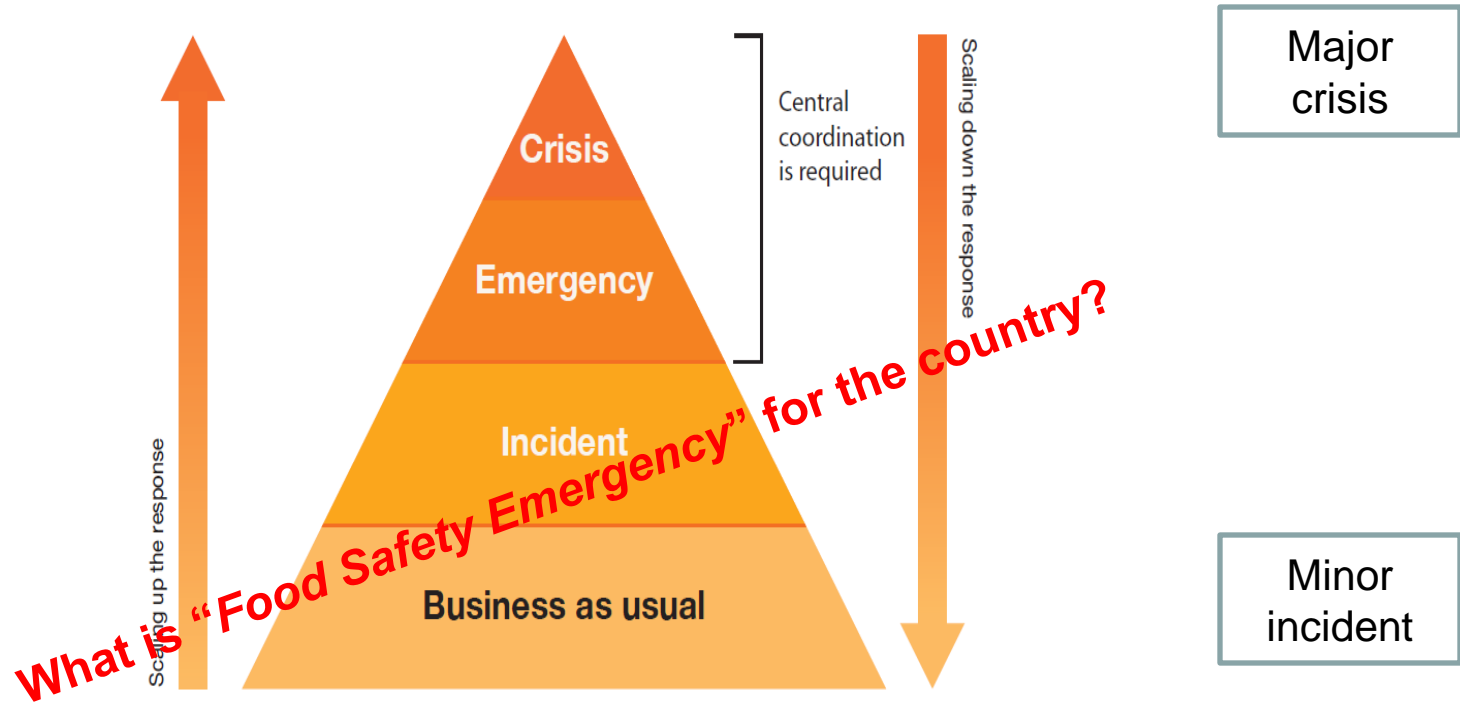
# Definition will differ along national contexts

We recognize that:

- a situation ranges from minor incident to major crisis
- a situation evolves over time
- severity varies (ie mortality, morbidity)
- international and trade implications vary

Plan ensures the coordinated response to a potential or confirmed risk to public health through food

# "Food Safety Events" ?



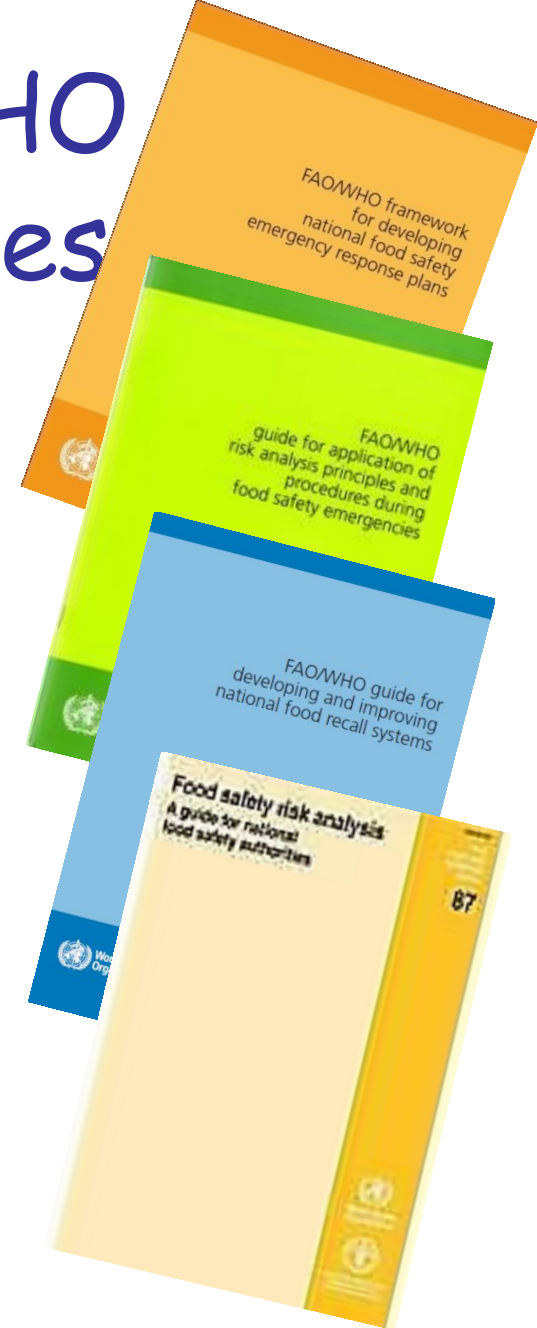
- No standard in international approach - must make sense for each country
- Situation evolves over time
- Response is scalable to meet the changing needs of the event (resources, coordination, decision making)
- Factors that effect response – numbers effected; severity of illness; volume of food effected; contaminant known/ unknown; structures in a country; etc

# Nature of Emergencies

- Emergencies of any description are characterised by:
  - Unpredictability
  - Confusion
  - Lack of Information
  - Lack of Time
  - Pressure to Act
  - Loss of Control

# Publications from FAO/WHO on Food Safety Emergencies

- FAO/WHO framework for developing national food safety emergency response plans (FAO/WHO, 2010)
- FAO/WHO guide for application of risk analysis principles to food safety emergencies
- Food safety risk analysis: a guide for national food safety authorities” (FAO/WHO, 2006)
- FAO/WHO Guide for developing & improving National Food Recall Systems





# Why Panning & Preparedness

- Reduces the number of decisions during an emergency
- Enables timely & coordinated response
- Reduces confusion (and disagreement)
- Agreed structures, roles & responsibilities
- Legislative authority & limitations understood
- Templates, decision trees, other tools increase efficiency
- Minimizes adverse impact on health & disruptions to trade

# FAO/WHO Framework for Developing FSER Plans

## Steps for development of FSER Plan

- 3 preliminary steps
  - Step 1: Obtain high-level support (& mandate)
  - Step 2: Identify key partners (agencies with some responsibility for food safety)
  - Step 3: Establish a planning group
- 5 key elements :
  - Step 4: Essential background information
  - Step 5: Multi-Agency Coordination Group (MACG)
  - Step 6: Incident identification & management
  - Step 7: Post-incident review & evaluation
  - Step 8: Communication

# The Planning Group will:

- Lead the process of developing a Plan
- Determine scope of the plan
- Oversee preparation of the plan
- Ensure appropriate review & consultation with key partners
- Collect legal texts, integrate with other national response plans, etc
- Seek approval
- Evaluate the plan periodically & ensure that a mechanism is in place to update the plan

# Key Considerations

- General

- Tiered response
- Build on food control systems
- Consideration to seriousness, geographical area
- Persons familiar – simulation exercises

- Country Specific

- Existing systems
- Gaps & limitations
- Food inspection, disease surveillance mechanisms, labs
- Resources

# Essential Background Information

- **Introduction** – purpose, objectives, reference to regulations, terminology/ definitions (**Emergency**)
- **Scope of the Plan** - food inspection & foodborne disease surveillance, testing capacities, treatments available (region/country)
- **Collection & review of all relevant regulations/ legislations** – legal basis for implementation
- **Any other national emergency plans** – list these, relationship with this protocol
- **Roles & responsibilities** of different agencies

# MACG (Multi Agency Coordination Group)

- General structure & composition - agencies involved; r&r of each partner; MACG for different areas (any existing structure);
- Notifying agency, Central notification point, Food incident contact officer, Lead agency, National/ Agency food incident controller, Communications controller
- TORs of MACG
- Communication strategy for MACG members
- Operational & logistic arrangements (contact list of members, address, ph, e-mail)



# Establishing a National MACG - Thailand

Representative Agency	Role and Responsibility
1. Food and Drug Administration	- Mandatory Food control, inspection and importing control
2. Department of Disease Control	- National IHR focal point - Food & water-borne disease, epidemiology data collection & surveillance
3. Department of Health	- Food & water sanitation, monitor & educate food handler
4. Department of Medical Sciences	- National reference laboratory, standardized accreditation
5. Food Safety Operation Center	- Nation INFOSAN emergency contact point - Functional structure to coordinate food safety policy and implementation
6. Ministry of Agriculture and Cooperatives	- Monitor and investigate primary products - Control exported food products
7. Ministry of Industry	- Industrial standardization and conformance
8. Ministry of Commerce	- Facilitation, promotion and direction for trading in domestic and international
9. Ministry of Tourism	- Distribute information to tourists/guide, food safety warning
10. Ministry of Interior and Provincial Offices	- Local authorities of food inspection - Liaise with food sector, trade and academia in communities

# Establishing a National MACG - Bangladesh

Draft

- National Food Safety Emergency Coordination Committee (NFSECC)
- **Structure:** The NFSECC includes two Committees that are separate but complementary operational entities and both include representatives appointed by five core agencies involved in food safety in Bangladesh namely:
  - MoHFW, MoF&L, MoA, MoFDM, MoI
- The two Committees are:
  - *FSE Policy Group (SPG)*, top-level decision making entity of the NFSECC; includes top senior administrative level officials nominated by five core ministries/ departments.
  - *FSE Technical Group (STG)* is a separate but complementary entity of the NFSECC; includes top senior technical officials nominated by five core ministries or departments.



# Incident identification

- Criteria for activating FSER; validation of criteria
- Identify possible information sources;
- Mechanisms for sharing information to be documented;
- Identify monitoring mechanism in multiple sectors – coordination mechanism; document
- Identify reference/ testing laboratories
- Identify documentation & evaluation mechanism (documents and records – where kept);

# Incident Management (1)

- Relies on **establishing control, direction & coordination** to deal with incidents
- MACG is responsible for overall management – state the same
- Identify who takes **lead** in food safety/ health related investigations, define the **process of coordination**
- Describe the **process of flow of information** to MACG and from MACG to others (daily information reports – develop a format), identify population at risk, duty roster may be made

# Incident Management (2)

- **Identify RM options** (detention, seizure, recall, closure of businesses, disposal of food products removed from food chain) & reference their procedures
- Procedure to decide **when to scale down**, communication process
- **Reference documents**, GLs, tools, check lists, templates
- A table of **agencies** with roles & responsibilities
- Process for maintaining central **records**

# Post incident review & evaluation

- Outline the process to conduct review of how incident was managed; strengths/ weaknesses
- Include reviewing process for
  - i. **response** activities,
  - ii. **communication** methodologies,
  - iii. regulatory procedures to prevent production/ distribution of **implicated foods**,
  - iv. capacity & reporting **of lab & inspection** service,
  - v. effectiveness of product **withdrawal**,
  - vi. identify gaps in lab testing/ regulatory procedures
- Review plan, if needed
- Sharing of corrective actions with policy makers

# Communication

- **Document strategies** for communication & information exchange (partners, media, public, international orgs)
- **Document processes** to address emergency alerts, intra agency communication, public messaging
- List of all **contact details**
- **Models & templates** - press releases, incident notification templates, recall/withdrawal notice templates
- Identify **means of information dissemination** (websites, newspapers, English language, public notices, SMS)
- **What to communicate** – the risk, what consumer should do if consumed effected product
- Decide on **spokesperson** (from an agency) – single person per event is preferable

# Risk analysis in emergency situations

# FAO/WHO guide for application of risk analysis principles to food safety emergencies

## Key Steps



- Preparedness
- Preliminary risk management (risk evaluation)
- Risk assessment
- Risk management
- Risk communication



# Food Safety Risk Analysis – Elements & Process

## Risk Management (RM)

### Preliminary RM Activities

- Identify FS Problem
- Develop Risk Profile
- Establish RM goals
- Decide on need for RA
- Establishment of RA Policy
- Commissioning RA (if needed)
- Consideration results of RA
- Rank risks (if necessary)

• Identify & select RM options

• Implement RM decision

• Monitoring and Review

## Risk Assessment (RA)

Hazard Identification

Hazard  
Characterization

Exposure  
Assessment

Risk Characterization

*functional separation & interaction*

Risk Communication

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# Preliminary Risk Management Activities

- Preparedness for food safety emergencies (criteria, decision trees, templates)
- Initial steps after identifying a food safety event
- Activation of emergency response
- Formulating targeted questions for risk assessors

# Initial steps after identifying a food safety event

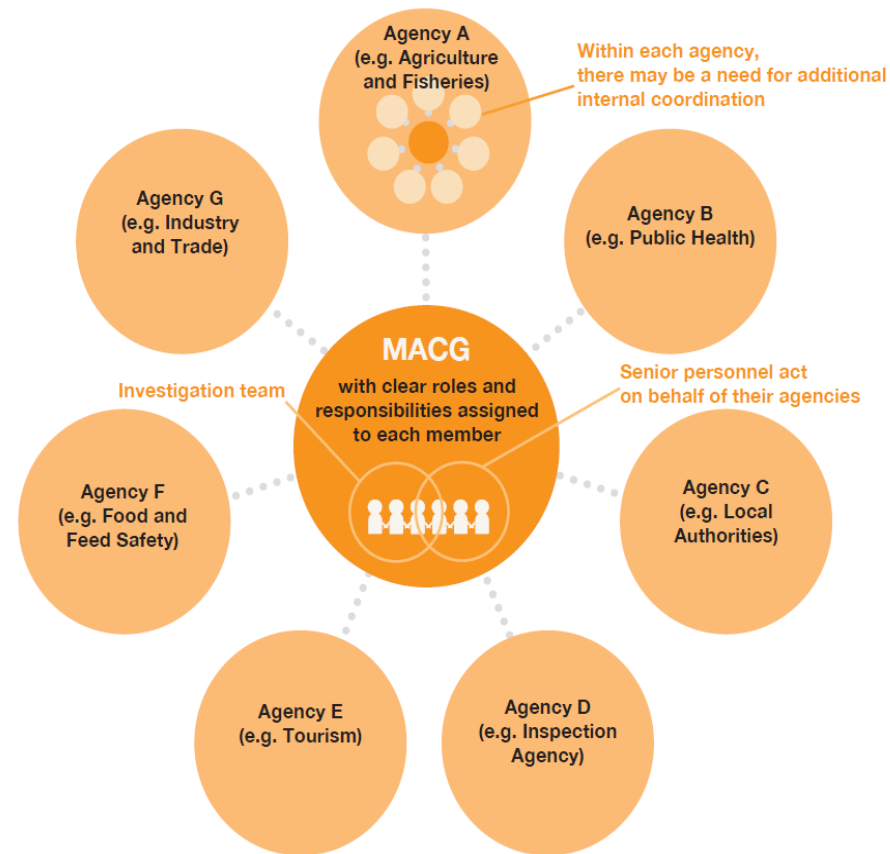
- On receipt of report of food safety event (widespread, difficult to control, serious health consequence)
- Determine
  - Likely magnitude of event
  - If need to inform/ involve higher officials
  - If emergency response plan needs to be activated
- Consider
  - Initial source of information (media, food inspectors, lab tests, partner alerts, consumer complaints)
  - Verification/ validation of initial reports

# Initial steps after identifying a food safety event

- Initiate investigations (food safety & epidemiological) to determine
  - Whether food potentially contaminated with a food hazard
  - Whether severe illness or death is involved
  - Whether event localized or widespread
  - Whether source of hazard has been identified
  - The involvement of a particular food source
  - Likely scope of distribution of product (e.g. local, regional, national, international)
  - If no action could it result in wide spread illness

# Activating of Emergency Response

- **FSE identified**
- RA procedures followed - more dynamic & intense
- RM actions before RA completed
- FSER Plan activated
- MACG established (r&r already defined)
- Risk communications expert included



# Activating of Emergency Response

- Risk managers should
  - Set the objectives for the emergency response
  - Identify data required
  - Evaluate any other relevant factors
  - Consider need to include other relevant agencies/ ministries in MACG
  - Determine stakeholders to be notified (e.g. senior officers, other agencies, affected private-sector establishments)
  - Consider inclusion of decision tree to model initial steps & resulting outcomes

# Formulating Targeted Questions for Risk Assessors

- Interaction between RA & RM rapid & frequent, initiated early, all channels used
- For formulating Q on RA, need to
  - Formally **engage relevant partners** to gather additional information
  - **Begin to collect & focus information for RA components** eg hazard characterization
  - For **new/ unusual hazards** emphasis on collecting field data
  - **Standardize terminologies** understood by industry, RAs & RMs to reduce miscommunication
  - **Targeted questions to RA** in standard format

# Standard Templates Examples

Annex 2.  
Example template for a  
Risk Assessment

## Emergency Risk Assessment (to be completed by risk assess

Assessment based on the written inf

**RA ####**

The information concerning ##### prod  
RA ####, a summary of which is given  
herein are specific to the situation des  
available at the time of conducting th

### Summary

Product category:

Common name:

Product type:

Hazard:

Brand name:

Annex 1.

Example template for a  
Risk Assessment Request Form

## Emergency Risk Assessment Request Form (to be completed by risk managers)

### 1. Issue Identification

Issue description	
Area of concern	
Date of request (YYYY/MM/DD)	
Issue number	
	Issue report attached? (please check)
Trigger	
Requestor name	

### 2. Scope (Please state clearly the risk management questions)

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### 3. Product Information

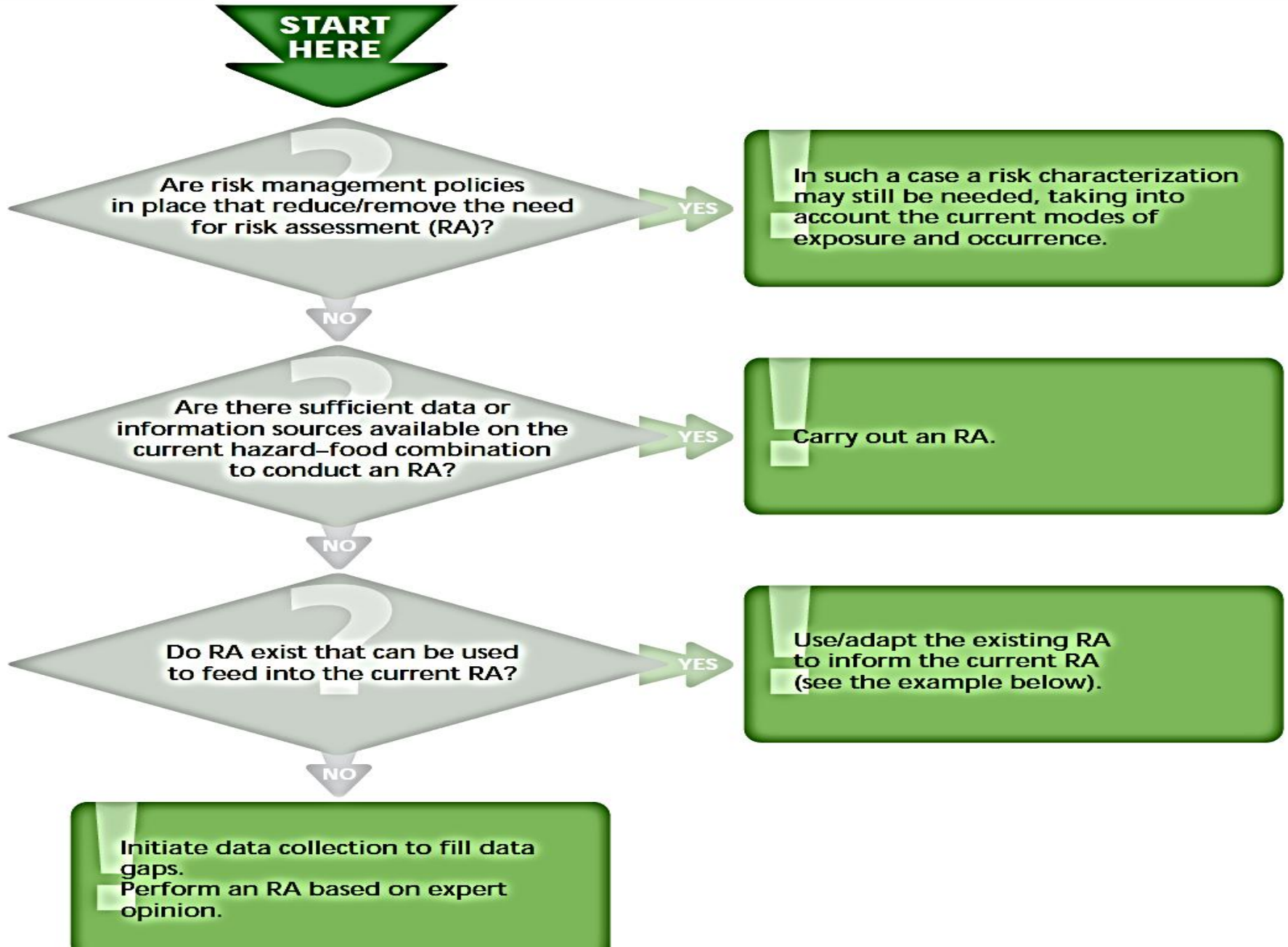
# Risk Assessment



# Risk assessment

- Screen incoming/ other available data & information **rapidly**
- Decide on appropriate **methodology & scope** of RA
- Does a RA need to be conducted?
  - Are food safety standards already in place?
  - Is there sufficient data to conduct an RA?
  - Could existing RAs be used to feed into the current RA?
- Time constraints may not support full RA but needs to be **robust**

# Example of a Decision Tree for Initiating Risk Assessments



# Risk assessment

- In an emergency situation, communication between RM & RA more **frequent**
- **Peer review** of RA especially where data is limited
- **Use of existing tools** can help –national or international consumption data sets, expert networks, international reference values, advice from international counterparts
- **Specific Considerations** - Absence of specific experience in country may contact CA/ experts from other countries; use of pre-existing scientific information or data specific to incident; information from company/ industry experts; expert opinions

# Risk assessment

- ***Hazard identification***

- Where data is insufficient/ hazard not fully identified/ insufficient time to generate new data

- Surrogate data may be useful (eg unknown serotype non 0157 E. coli , 0157:H7 data could be used)

- Testing methodology

- Validated rapid test methods used to identify hazards if possible
- Where no validated method available in-house, review literature/ seek international advice/ develop a method.

# Risk assessment

- ***Hazard Characterisation***
  - Existing data from toxicity studies, guideline values, dose-response models, etc can be used to expedite RA
  - Where dose-response information is not available, a conservative approach should be taken and whole population should be considered sensitive

# Risk assessment

- ***Exposure assessment***

- Existing national consumption data preferred

- Alternatives include

- Household food expenditure surveys

- Models

- Other national datasets

- International data (eg WHO GEMS)

- ***\*It is important to identify & document assumptions used in dietary exposure assessment modelling***

- *Refined as new information available*

# Risk assessment

## ***Risk characterisation***

- During an emergency, initial information is often **qualitative or semi-quantitative** due to time and information constraints
- **Decision trees** can be very helpful in quantifying and communicating levels of risk

# Risk assessment

- **Expedite** the RA
- Important to document and explain **limitations and uncertainties** (data gaps)
- Need to **revise** risk assessment as new data becomes available
- **MACG to consider revised** risk assessment – and RM or RC implications



# Risk Management

# Risk management

- Although **public health and safety** is paramount, social and economic impacts also to be considered
- **Preparation** will help with RM decisions in an emergency – eg pre-agreed RM options, decision triggers, documents, templates/decision trees etc
- **Documenting** RM decisions critical
- **Risk categorization** system useful – enables rapid, consistent RM decisions

# Risk management

- Factors to consider in selecting RM options
  - **Capacity issues**, eg to implement RM or laboratory capacity/ ability to obtain assistance from elsewhere
  - **Uncertainty** about the nature of the risks
  - **Public expectations & perceptions**
  - **Legal considerations**
  - **Industry** considerations (Industry support/ cooperation)
  - **International** considerations, eg actions taken by other countries, trade implications
  - Others

# Risk management

- **Implementation** of RM decisions
  - May need to involve agencies/ministries not usually involved in food enforcement
  - Legal authority for dealing with industry eg recall actions else advice to public
  - Consultation and coordination with industry
  - Widely used ingredient - complex supply chains and traceability
- **Monitoring, evaluation** of options/ results

# Risk Communication

# Risk communication

- May be very different from usual approach
  - Demands for **frequent updates** from different stakeholders
  - Urgent demand for **up-to-date reports**
  - Communicating **complexity & uncertainty**
  - **Messages developed in very short timeframes**
  - Messages **change** as situation unfolds
  - Public, media or political scrutiny & pressure for action

# Risk communication

- Communicating with industry
  - **faster response** & possible an earlier return to market of implicated products
  - **Contact points** for use in emergency established
    - industry/ government
  - **2-way**– industry a good source of information & may assist in implementing RM
  - Industry to be aware of investigation approaches, RM options & legal basis, FSER GLs
  - **Consistent/ complementary** messages by government & industry

# Risk communication

- Communicating with the general public
  - Early communication critical even in uncertainty
  - Two-way
  - Public trust can be easily damaged
  - Be as accurate as possible, timely, consistent, demonstrate confidence, well targeted & address public concerns
  - Identified agency to take lead
  - May need to counter inaccurate/ misleading statements by others



# Risk communication

- Communications to the public to cover
  - Details of the food safety emergency
  - The foods involved
  - The risks & if known
  - Levels of exposure that are harmful
  - What public should do if affected products consumed/ obtained
  - How to access additional information
- Different ways to communicate with public
  - traditional/social media, signs in shops, advertising, health/ field officers

# Risk communication

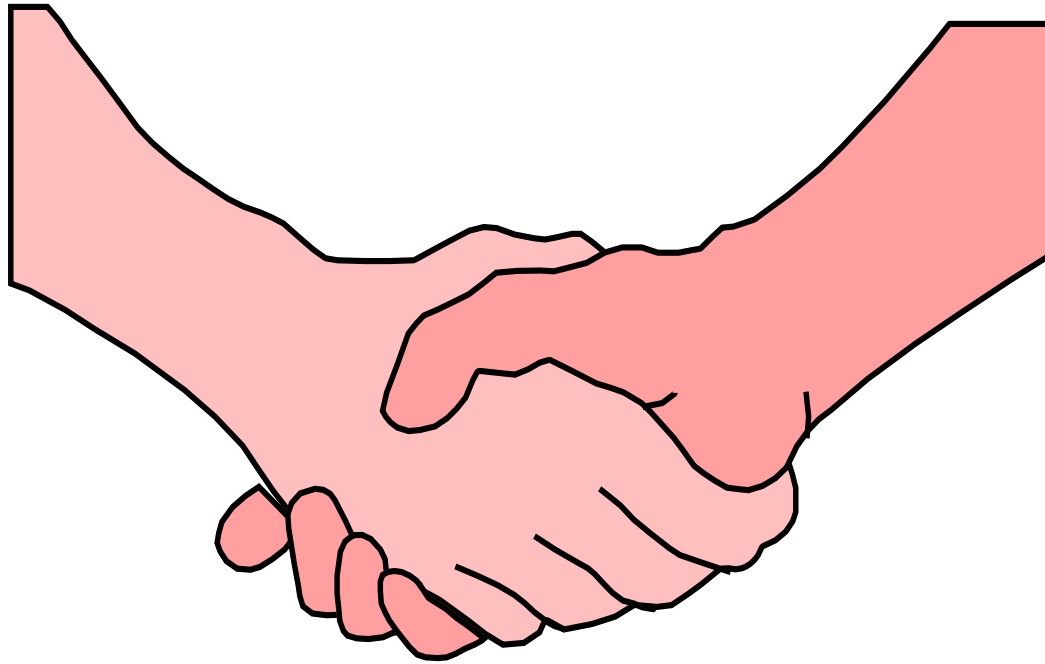
- Communicating with international/ regional bodies
  - ✓ International counterparts
  - ✓ Importing countries
  - ✓ International bodies, eg INFOSAN

# Conclusion

- Countries **to define emergency** in terms of own, systems, resources & capacity
- Emergency response can **differ** in countries
- Application of RA to follow **same principles** as in normal situations
- **Differences** are factors effecting decision making – time pressure, increased uncertainty
- increased need for **multi-agency coordination**, strong demand for timely communication
- **Preparedness** is the key – FSER Plan & team, MACG, data & information, tools

# THANK YOU

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## Any Questions?