



Food safety and food security: A global point of view

Food and Agriculture Organization
of the United Nations
Masami Takeuchi, Ph.D.



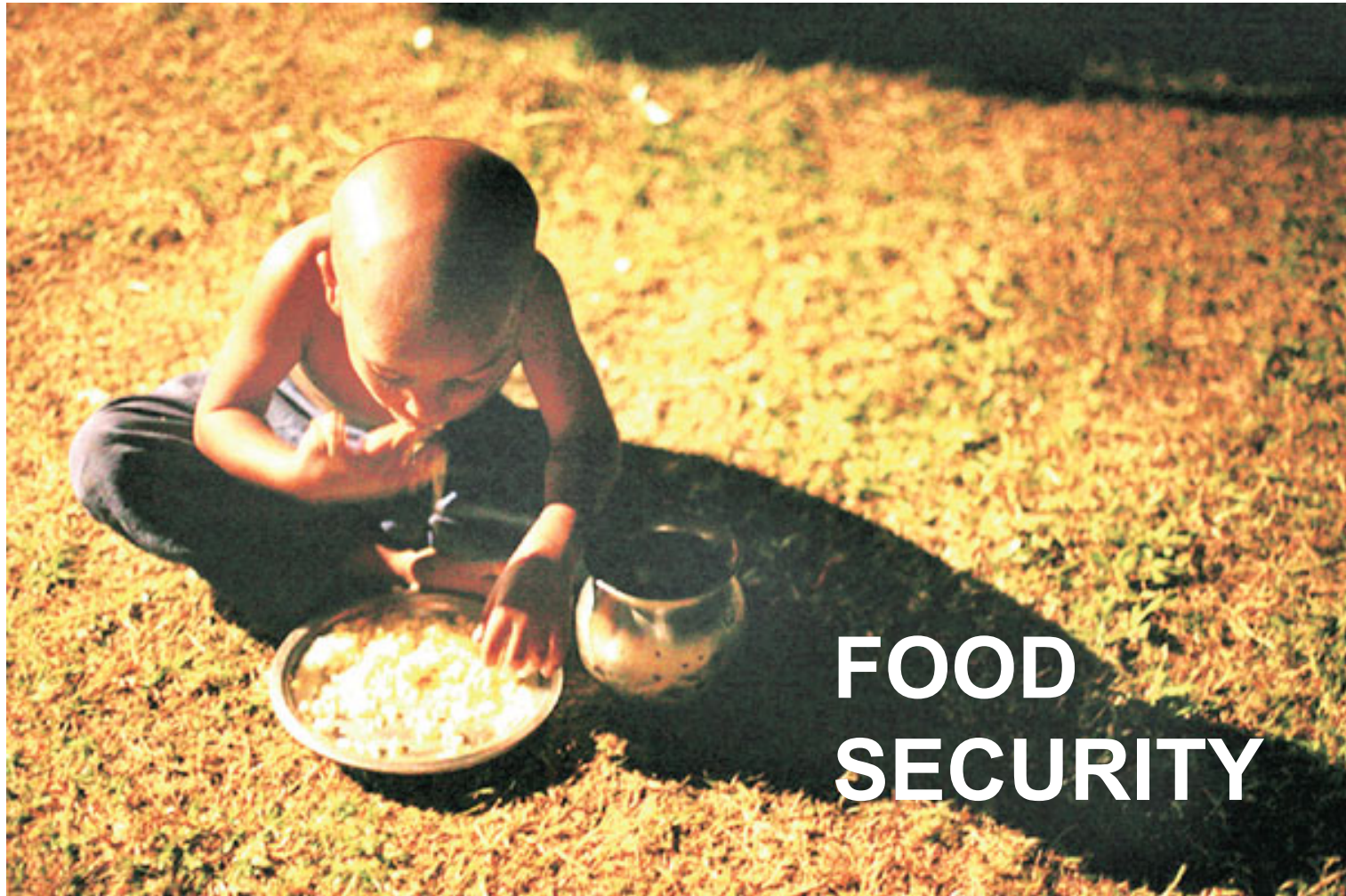
Food and Agriculture Organization of the United Nations



FAO Headquarters Rome, Italy



FAO's mandate



UN appreciation award

**Minister: this pride for us, because only
35 countries succeed**



**FAO: Indonesia 2 years more quickly beyond the
MDG targets, specific targets for lowering the number
of hunger and malnutrition**



Definition of food security



- “Food security exists when all people, at all times, have physical, social and economic access to **sufficient, safe** and **nutritious** food”
 - [FAO World Food Summit, 1996]





Why food safety is as important as food security?

What are they making?



Mud cookies

- Food scarcity can coerce populations to consume whatever food is available.
- Even if it can be unsafe.
- Or possibly contaminated...
- In rare cases, this is valued as a form of culture/traditions.



What is this?



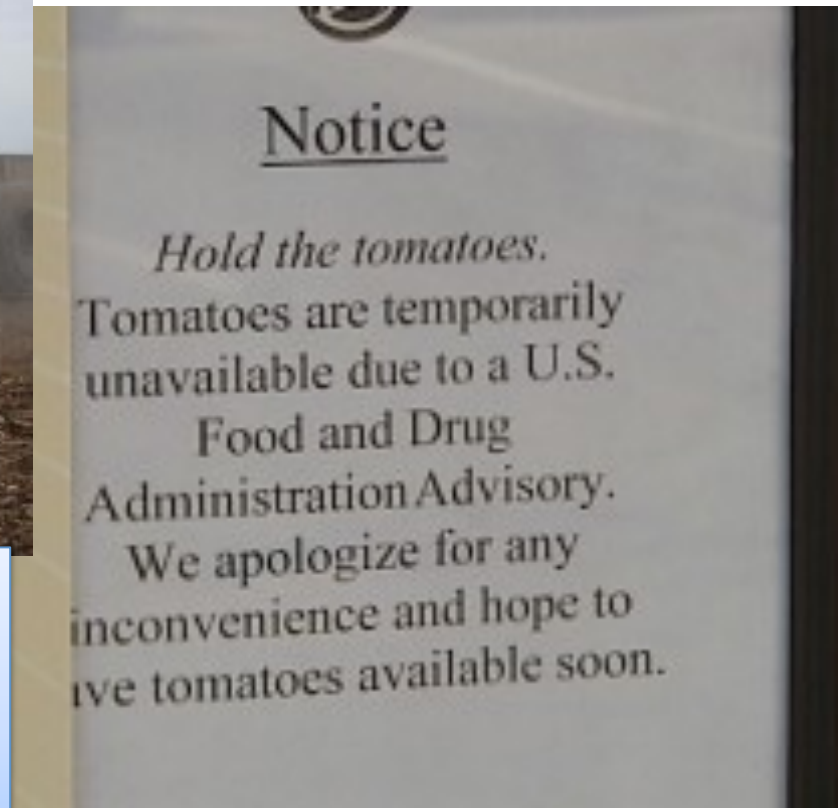
It is a waste management field



Salmonella contamination

What if this happens in a country already facing food scarcity?

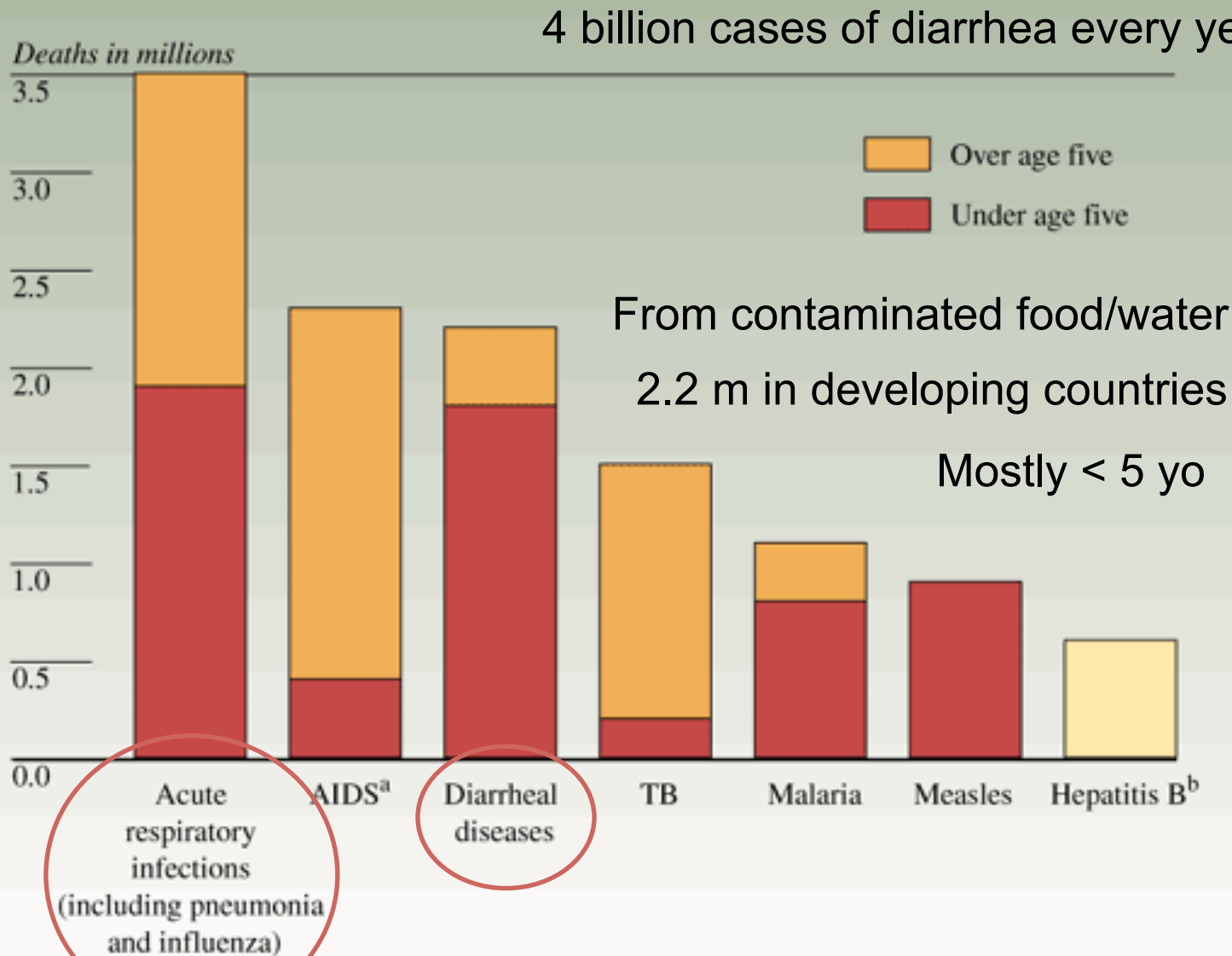
Large glass pieces' presence



Food Wastage Footprint

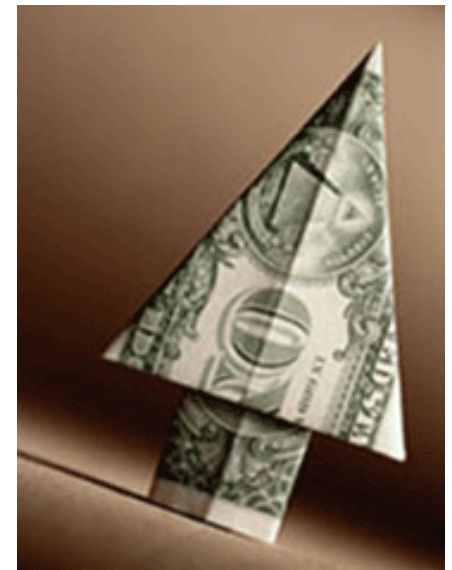


Leading Infectious Disease Killers, 1998



High cost of food safety incidents

- Loss of life
- Public health (hospitalization, medicines)
- Producers/farmers, food industries (economic loss, loss of consumer confidence)
- Government authorities (economic loss and credibility impacted)
- Cost for trade disruption and food recalls



Aflatoxin in maize in Kenya (2004)



317 cases and 125 deaths



Salmonella in peanuts in US (2009)



3900

RECALLED



9 deaths, 22, 500 illnesses, enormous financial loss



Dioxin contamination of pork from Ireland (2008)



Culling of 100, 000 pigs, destruction of 125 million euro worth of food, and total economic losses in excess of US\$1 billion. All EU countries affected.



Melamine contamination of dairy products (2008)



6 deaths, 300, 000 illnesses and more than 115 types of contaminated food products globally



FAO food safety and quality

1. Codex Alimentarius secretariat

2. Provision of scientific advice on food safety

4. Emergency prevention system for food safety

3. Capacity development on food safety and quality



1. Codex Alimentarius

- Intergovernmental Standards-setting Body established by FAO and WHO in 1961/63
- <http://codexalimentarius.org/>
- Approx. 180-190 Member Countries + 1 Member Organization (European Community)
- Approx. 220 Observers



Codex mandate

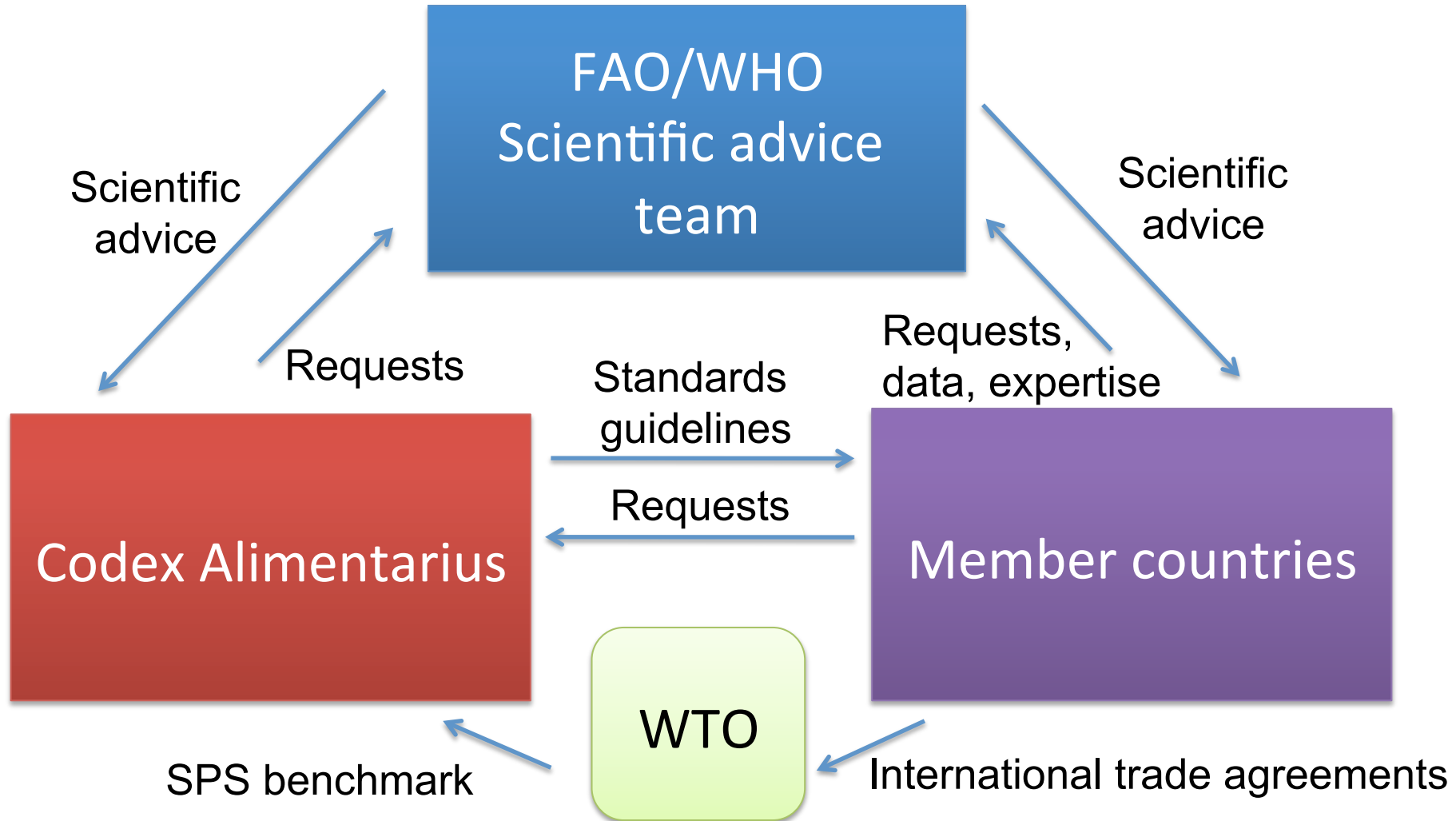
- Two major objectives:
 - Protecting the health of consumers
 - Facilitating fair practices in food trade
- Non-mandatory in nature
- **But** Codex standards/texts: international benchmarks for WTO agreements





Commission (CAC) in Rome

2. Provision of scientific advice



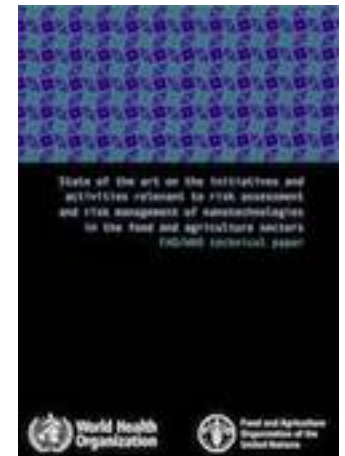
Food safety hazards

- **Chemicals**
- **Biological contaminants**
- **Physical contaminants**
- **Others:** biotechnology, nanotechnology, new issues



Ex. Risk analysis of nanotechnologies in food and agriculture

- FAO/WHO overview paper in 2009
 - Increased availability to consumers
 - Nanoscale range (between 1 and 100 nm) may have different properties
 - Feasibility check of applying existing food safety risk assessment paradigm
 - Imperative to involve all stakeholders
- Status update in 2013 – risk assessment and risk management practices in the world



3. Capacity development

- Based on country priorities and needs
- Build on existing strengths and resources
- Science-based
- Inclusive (farm to table)
- Sustainable



Ex. Implementing an integrated approach of animal & plant health and food safety



- Lessons learned from: Norway and New Zealand
- Asia: Vietnam and Bhutan
- Africa: Gambia, Malawi and Ghana

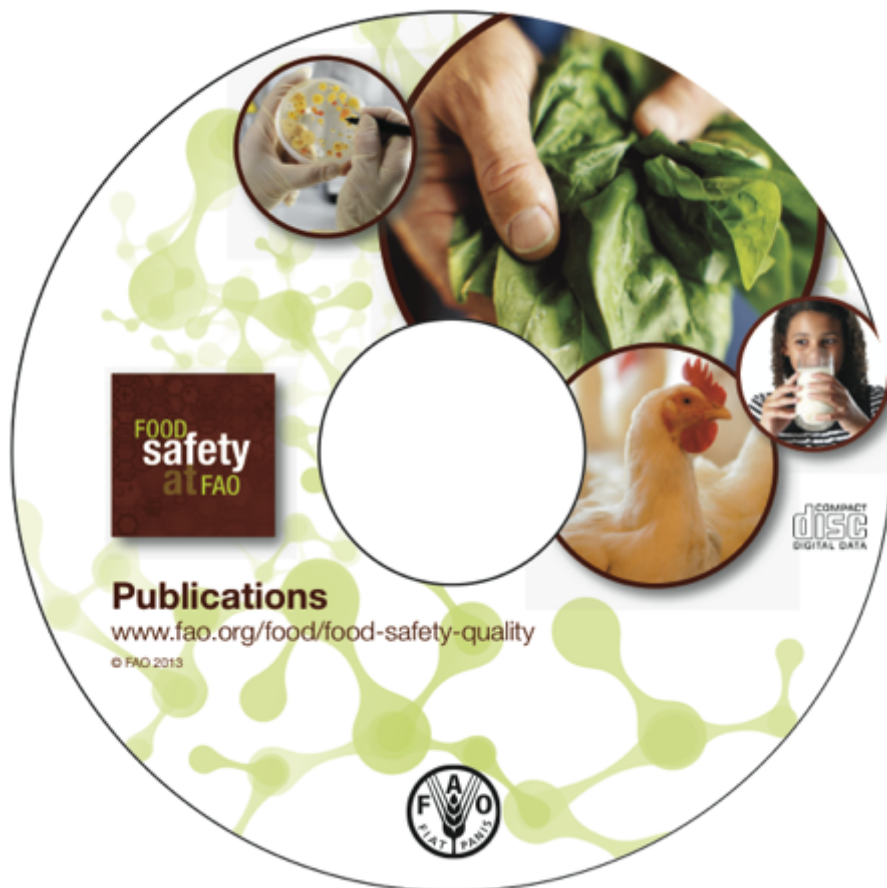


4. Emergency Prevention System for Food Safety (EMPRES Food Safety)

- Emergencies can quickly spread due to rapid international food trade
- FAO focuses on
 - Early warning
 - Emergency prevention
 - (Rapid response)
- Tools:
 - Framework for developing national food safety emergency response plans,
 - Rapid risk analysis guide,
 - Food recall guide, etc



Food safety and quality publications



Or
visit website:

<http://www.fao.org/food/food-quality-safety/>



FAO Food Safety Expert Roster

- For faculty members, post-docs, grad students
- Are you interested to provide food safety scientific advice to FAO?
- Are you interested to contribute to FAO projects including field missions?
- Access:
<http://fao.org/good/expert-roster>



For more information about FAO or its work on food safety

- FAO: <http://fao.org/>
- Food safety and quality website:
<http://www.fao.org/food/food-quality-safety/>
- General queries to our unit:
food-quality@fao.org
- Other questions (welcome!):
Masami.Takeuchi@fao.org





Questions?

Thank you

Merci

iGracias

谢谢

Спасибо

شكرا

