Top Ten Food Safety Challenges Globally

Food World – India 2010

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Key Food Safety Challenges

1. Water borne Diseases
   - Water Management Systems
2. Globalization
   - World Your Marketplace
3. Local Outbreaks
   - Breaking News . . . . we can do without
4. Animal to Human Contamination
   - Transmitting infections
5. Risk Assessment – the role of science
   - Journey from “Hazard’ to ‘Risk’
6. Risk Communication
   - Scientific Authority . . . . shy or shackled
7. Consumer Confidence
   - An Anxious Age

1. Water borne Diseases

Water Management Systems

Water borne Illness – Priority

- Worldwide diarrhea causes 4% of all deaths
  - 5% of all disabilities
- Estimated annually that in India
  - 37.5 million affected
  - 4 – 5Lac children < 5yr die of diarrhea
- Good Environment Practice (GEP)
  - 90% water discharge untreated
  - Waste Disposal - Segregation
- Good Household Practice (GHHP)
  - Indian Habit of ‘ Boiling’

Mudur: BMJ 2003; **326 :** 1284

Water.org

2. Globalization

World Your Marketplace

The Global Marketplace

- Dough
  - France, UK, US, Poland
- Sugar
  - UK, Indonesia, Jamaica
- Spices
  - Greece, Italy, Morocco, Spain, Kenya
- Salt
  - *UK, France, China*
- Tomatoes
  - Greece, France, Netherlands
- Toppings \
  - Cheese – *Greece, Italy, Switzerland*
  - Anchovies – *Peru, Argentina, Falkland Islands*
  - Pepperoni – *Denmark, UK, USA*
- Garlic, pepper chili etc
  - from a host of countries

35 ingredients from 60 countries

- *How do you test safety?*
- *Country of Origin Labelling ?*
- *Need for International Standards of Safety*

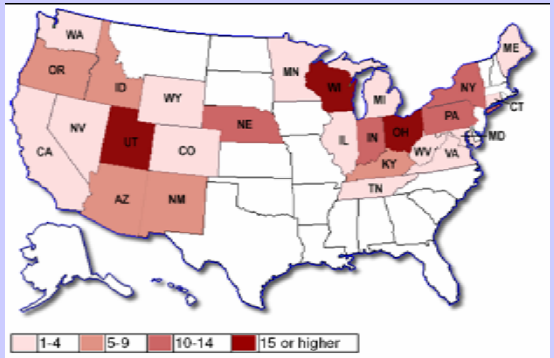
3. Local Outbreaks

Breaking News . . . . we can do without

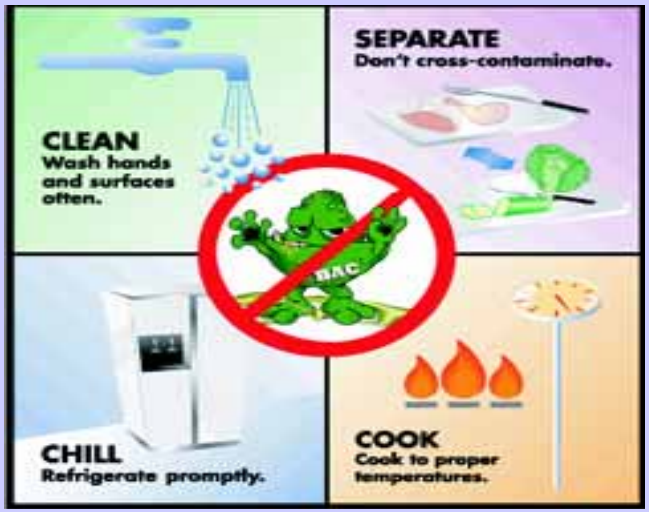
Outbreaks – Industry Loss

- Spinach (2006) – *E.coli*
  - 205 infections
  - 26 states
  - 3 deaths

- Egg Products (2010) - *Salmonella*
  - 500 million eggs/product
  - 48 states
  - No fatalities
- Peanut Butter (2009) - *Salmonella*
  - 8 deaths, 683 illnesses
  - 46 states
  - 400 products
- Industry Impact
  - PCA - 2.5% of peanut market
  - Consumers stop buying other brands
  - Industry sales down 25%
  - Estimated $ 1billion loss



Food Recalls – Major Causes



- Pathogens
  - Listeria
  - E. coli
  - Salmonella
- Undeclared Allergens
- Foreign Matter

Cause	2001	2003	2006	2009	2001 - 2009
Micro	8	3	5	3	41
Foreign Matter	9	7	10	1	57
Allergen	1	21	6	2	70
Quality	2	2	2	0	7
Chemical	2	3	3	1	14
Total	22	36	26	7	189

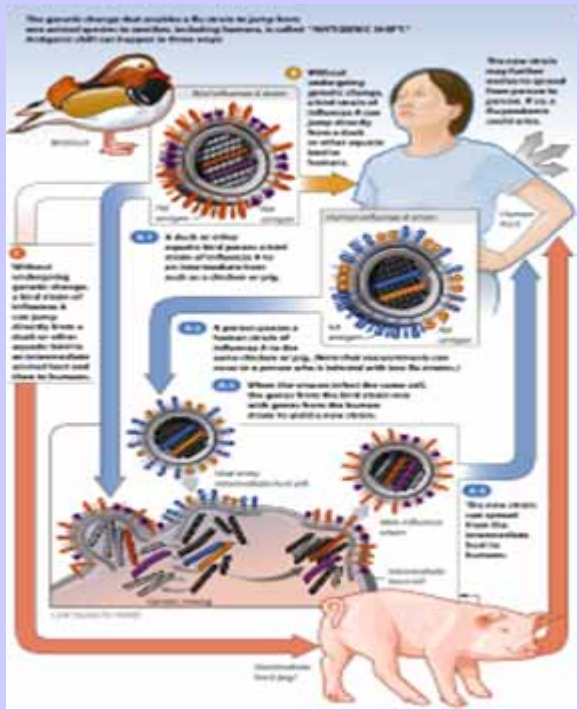
http://www.nzfsa.govt.nz/recalls/statistics/

4. Animal to Human Contamination

Transmitting infections

Zoonotic Diseases

- Swine Flu – H1N1
  - 2009 WHO declares pandemic
  - 17,000 deaths
  - Affected > 214 countries
- Bird Flu – H5N1
  - East Asia
  - > 100million culled
- Animal Health – emerging issue
  - Transfer from animal to handler
  - Human to Human



5. Risk Assessment – the role of science

Journey from “Hazard’ to ‘Risk’

Risk Assessment – role of science

AT a reception honoring his service as Chairman of the House Science Committee in November 2006, retiring Representative Sherwood Boehlert (R-NY) quipped:

"*Washington is a town where people say they are for science-based decision making until the overwhelming scientific consensus leads to a politically inconvenient conclusion.*"

Aflatoxins - how much safer . . . .

- Science behind the limits?
  - Lower limits than international practice
  - Codex no separate limits for B1
  - Reducing levels from 20 – 10ppb
  - Account for 2 death per billion population
- Loss of Trade & Markets
  - African exports decreased 64%
  - Loss of $ 670million

- Higher the restriction the better
  - Popular belief
- How are we 'Harmonizing'

Aflatoxins Limits: µg / kg			
Country	Total	B1	M1 (milk)
India	30	*	0.5
US	20	*	0.5
EU (unprocessed)	4 15	2 8	0.05
JECFA	20	*	-

*** No separate limit**

European Review of Agricultural Economics: Otsuki 2001

6. Risk Communication

Scientific Authority . . . . shy or shackled

Risk Communication

- **Undermining of Scientific Authority**
  - ‘food scares’ are popular news
  - Inability to distinguish ‘industrial’ from ‘natural’
  - GM Foods / Growth Hormones
- **Different Countries – different standards**
  - Consumers do not understand ‘ exposure’
  - Minimum Residue Limits and ADI
  - Understand ‘ Hazards’ not ‘Risk’

7. Consumer Confidence

An Anxious Age

An Anxious Age

- From Mad Cows to Bird Flu
  - Importance of the Supply Chain – animal and plant health
  - Illnesses cross geographical borders
- Bt Brinjal to FlavrSavr™ Tomato
  - Crossing the ‘ Natural Culture’ fault line
  - Diatribe to Dialogue -
- Lower is safer – messaging conflict ?
  - If lower is not safer
  - Then so is ‘ free of additives’

Meeting the Challenge

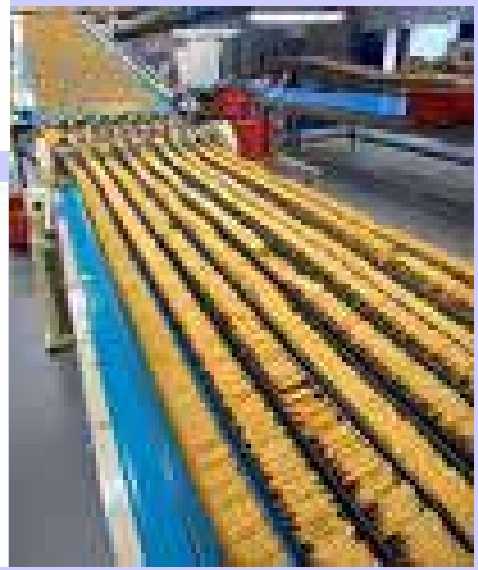
- Scientific Advancements:
  - Limits of Detection
  - *Easier methods for pathogen testing*
- Food Habits Changing
  - Eating Out and Eating on the Move
  - *Traditional ‘ hot home cooked’ decreasing*
- Newer technologies – new ‘apprehensions
  - Irradiated Foods, GM Foods, Nanotech, Novel Foods
- Cross Country Contamination
  - Animal Health

Regulation Role Change

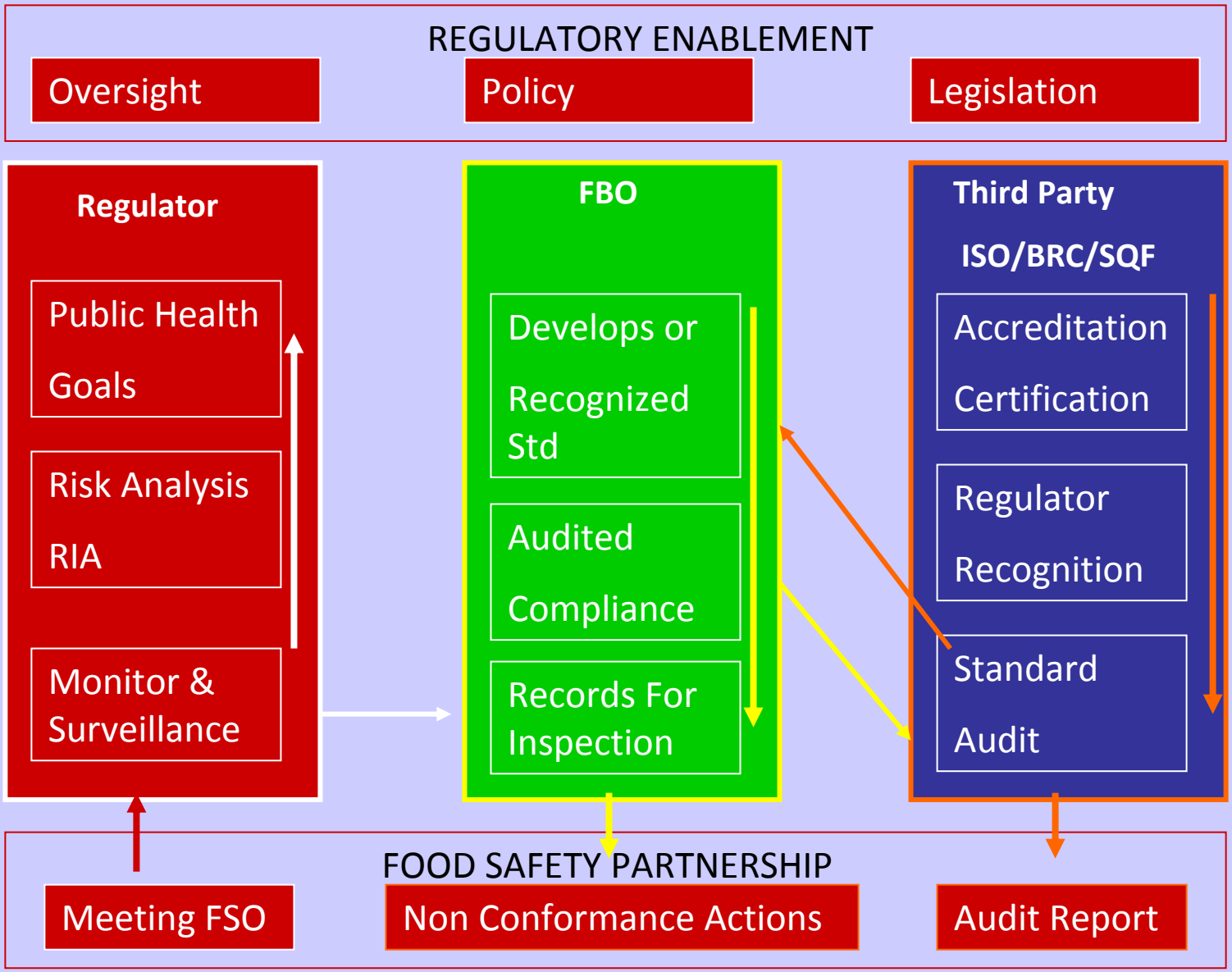
Assuring Safety Process

- Regulator
  - Role of Facilitator
  - Enforcement to Enablement

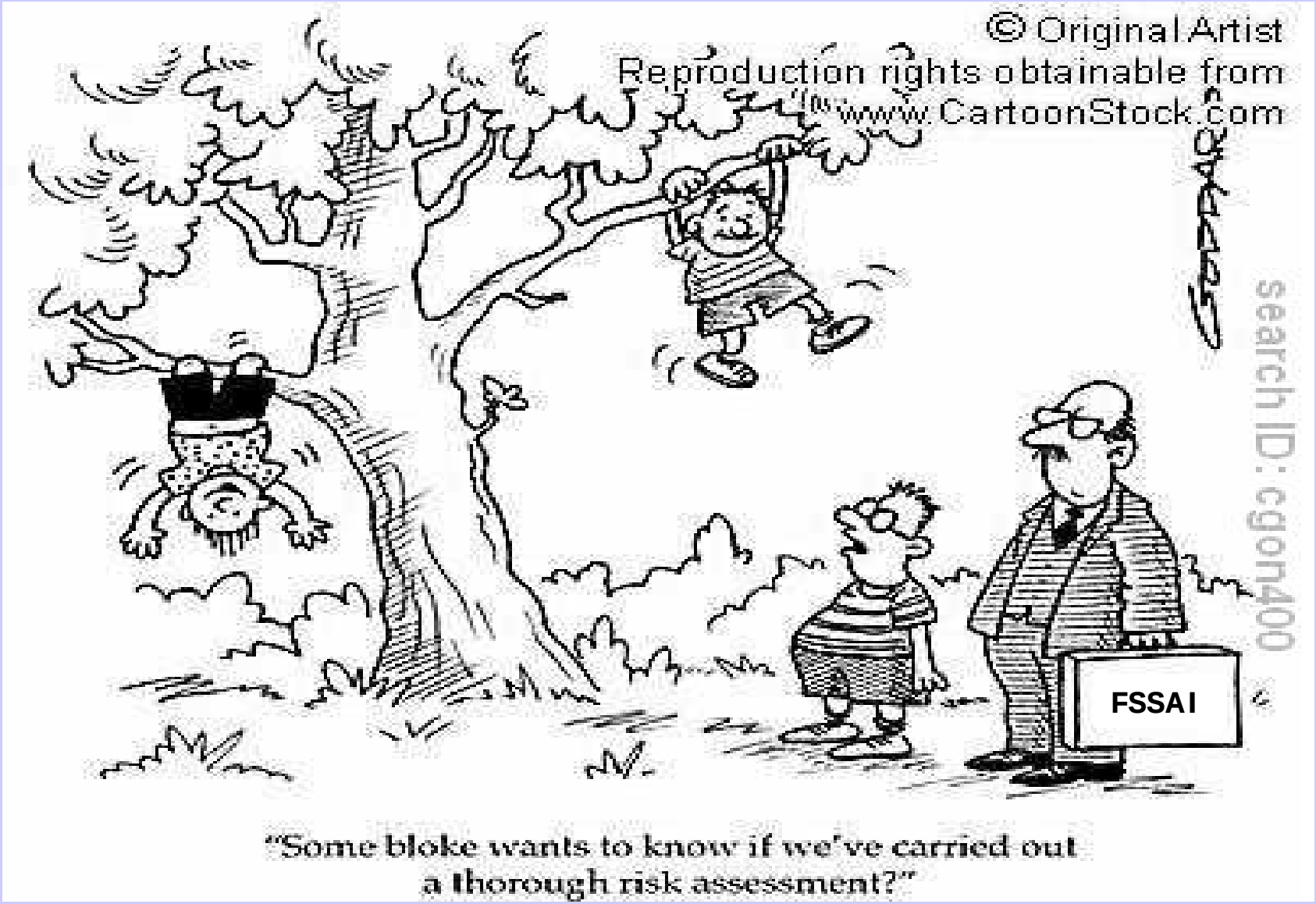
- Food Business Operators
  - Develop Food Safety Systems
  - Water Management Critical
  - Training & Infra Development
- Trade Related Accreditation
  - Conformity Certification
  - Audit



8. Regulation – How it works



Thank You



"Some bloke wants to know if we've carried out a thorough risk assessment?"