



# Are International Food Standards Coping with our Needs ?

International Life Sciences Institute  
Assembly of Members

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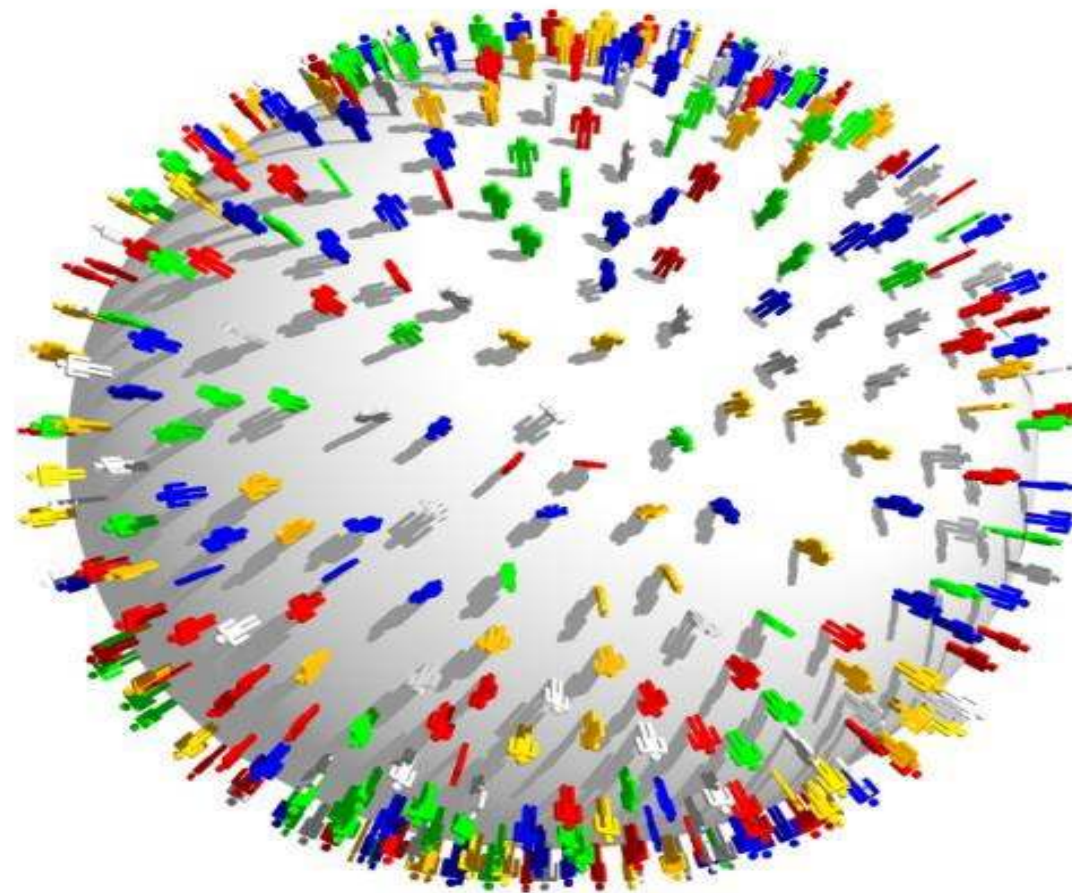
23 January 2017

*San Diego, CA, United States*

- ❑ Current Drivers of Change in Food Safety and Nutrition Landscape
- ❑ Impact on International Food Standard Setting
- ❑ Opportunities to Re-Shape International Food Safety and Nutrition Standards Development Agenda to Address Current and Future Needs

# Food Security : An On-going Challenge

By 2050 the World  
Population will  
reach an estimated  
9.6 Billion  
individuals

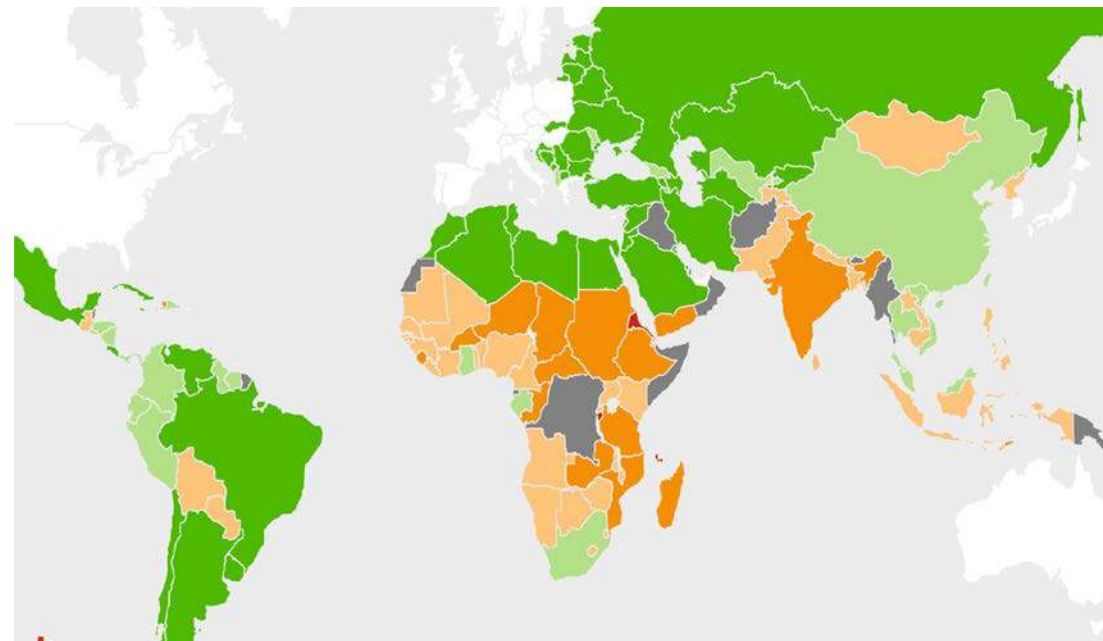


*UN report 2013: World population prospects: the 2013 Revision –  
Highlights and advance tables, Working paper NO ESA/P/WP228, UN  
Department of Economic and Social Affairs, Population Division, NY*

# Areas of Population Growth =

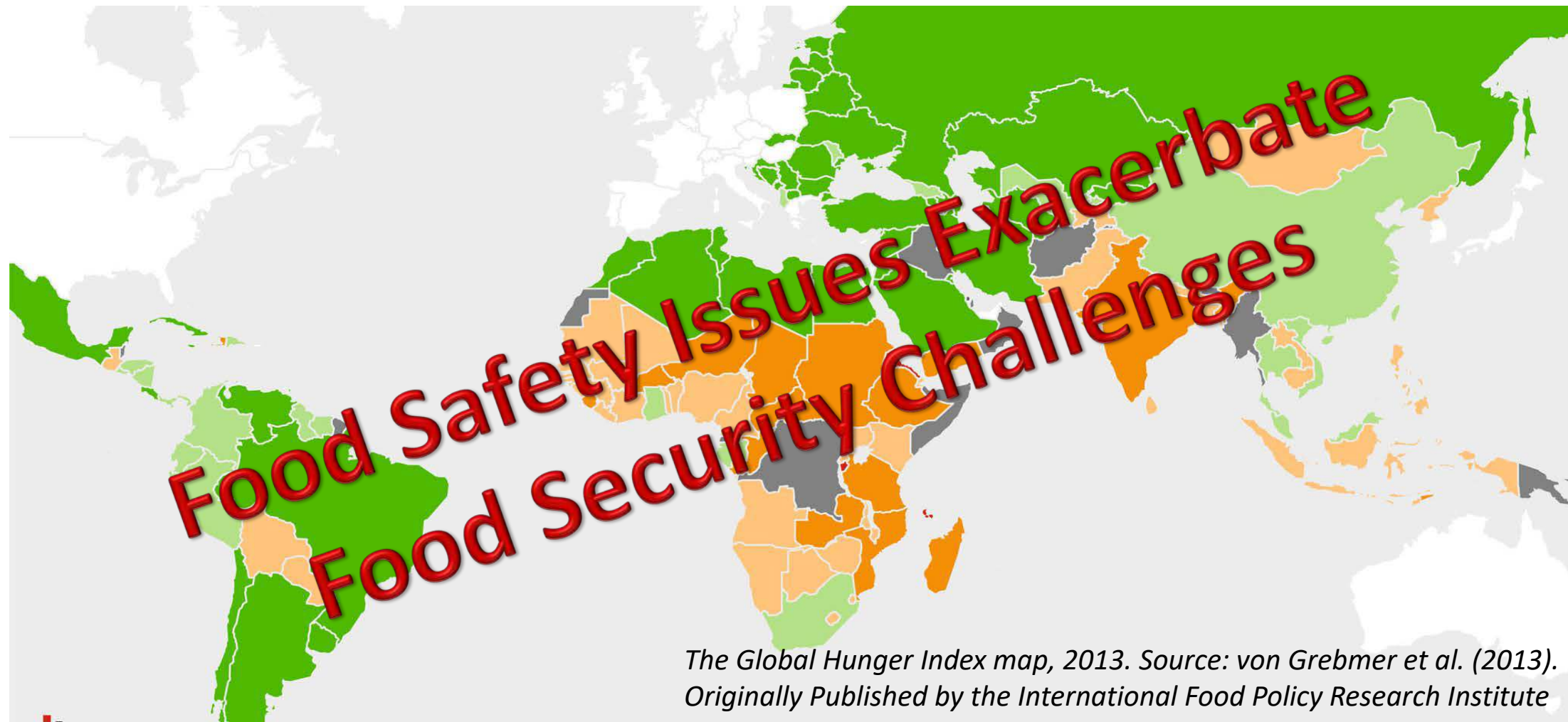
## Areas Suffering from Food Security Issues

- Current 7.2 Billion will grow by one third (1/3)
  - Highest areas of growth will be witnessed in developing nations
    - e.g. Sub-Saharan Africa has one of the highest levels of fertility
  - Same areas currently suffering from malnutrition and hunger will be subject to highest population growth
  - Added Food Security Challenge



*The Global Hunger Index map, 2013. Source: von Grebmer et al. (2013). Original publication International Food Policy Research Institute*

# World Hunger Index Map



# Food Safety is Responsible for Food Waste

- ❑ Currently about 30% of food production is wasted worldwide – some estimates put this at 50%
  - *UK House of Commons (2013) Global Food Security. First Report of Session 2013-14 (Vol. I) London: International Affairs Committee*
- ❑ Inefficiencies in the Food Value Chain, resulting in food safety concerns from production to availability, result in major food waste and losses
- ❑ Eliminating food loss and waste is expected to feed 870 million undernourished people worldwide
  - *Da Silva, JG. (2013), Food Losses mean hunger, the Think-Eat-Save Reduce your footprint campaign of the save food initiative, partnership between UNEP – FAO and Messe Dusseldorf*
- ❑ Reduction and/or Elimination of Food Waste can be an opportunity to support Food Security

# Why Do Food Standards Matter in This Case ?

Département Sciences des aliments  
Department of Food Science



UNIVERSITÉ  
LAVAL



Food Risk Analysis &  
Regulatory Excellence Platform



Queen's University  
Belfast

# Importance of International Food Standards

- ❑ World Food Program relies on compliance with (international) food standards
- ❑ Prevention/Reduction of food waste could be supported by Enhanced Food Safety Standards
- ❑ Novel sources of Protein require new standards to be accepted
- ❑ Novel processes of food production to address Climate Challenges require acceptance





# Drivers of the Food Standards Development Environment

- ❑ Food Production (and Trade) continues to be an important sector of World Economies
- ❑ Ever more Complex Supply Chains = We have never been more interdependent
- ❑ Demanding Consumers
- ❑ Suffering from Food Insecurity and Obesity at the same time
- ❑ Emerging Issues :
  - New “Contaminant / Food Vehicle” pair
  - Anti-Microbial Resistance linked to aspects of food production
  - Climate Change

# Witnessing Changing Food Regulatory Environments

- ❑ Preventive measures enshrined in several food safety regulatory measures :
  - “Food Hygiene Package” adopted in Europe in Mid 2000s
  - FSMA in 2011
  - Safe Food for Canadians Act in 2012 in Canada
  
- ❑ Stronger Emphasis on Nutrition Rules
  - e.g. labelling rules



# International Standards : Leadership for Change

- ❑ Served the international community for over 5 decades :
  - Leveling the playing field between nations
  - Addressing emerging issues
  - Supporting consumer protection and removing undue impediments to trade
- ❑ Led the way in transforming food regulatory measures :
  - Developing and Adopting Risk Analysis Principles
  - Leading role in :
    - Allergen management
    - GMO assessment
    - Nutrition labeling requirements
  - Addressing Emerging issues :
    - Assessment of radionuclides
    - Addressing Melamine incident, etc.



# International Food Standards Development has Witnessed Challenges over the Years...



# Challenges Identified by Food Stakeholders

- ❑ International Standard development tends to move slowly when there are differences in cultural acceptance
  - E.g. Veterinary applications, certain food additive application
  
- ❑ Resources for (international) Assessment tend to be limited
  
- ❑ Difficulty to get consensus when International work is attempted last
  - Each jurisdiction is defending its risk management approach

# What happens when the International Standards Development Process is Marginalized ? ....

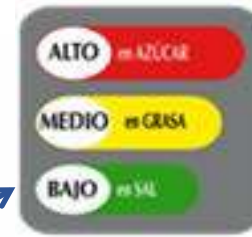


## ... Different Approaches ... Multiple Rules ... CONFUSION

### Illustration

- ❑ Multiple countries embarked on “Nutrition-related” risk management measures through labelling
  
- ❑ Front of Pack labeling used as a way to inform or deter consumers from products with high fat, sugar and sodium
  
- ❑ Multiple Experiences lacking
  - Common Methodology : Approaches based on composition (for total ingredients), others on added ingredients
  - Impact Assessment Approaches : Methodologies to assess possible effectiveness

# Complicated Situations...Including in Neighbouring Markets



*Ecuador traffic light*



*One of the Canadian Proposals – FOP*

*Chilean Law 20606 – Nutritional Composition of Foods and its Advertisement – From Dr. Susana Socolovsky, Pentachem consulting*



# Key Question ?

- ❑ Are we addressing the issue with the right tool(s)?
  - How effective are food labels in a “technology age”, when issues being managed are associated with consumption behaviors



# Need for a Common Approach ....

- ❑ Evidence-based decisions in managing risks
- ❑ Common Principles to address the same / similar risks
- ❑ Leveling the playing field between countries
- ❑ Avoiding technical barriers between countries



# Proposed Future Directions ...

## DEVELOPMENT AND APPLICATION OF INTERNATIONAL FOOD SAFETY STANDARDS—CHALLENGES AND OPPORTUNITIES

Samuel Benrejeb Godefroy\* & Renata Clarke\*\*

### ABSTRACT

*International food standards offer the opportunity to provide guidance in preventing and mitigating food safety risks, while enhancing convergence of food regulatory measures adopted around the globe. The Codex Alimentarius Commission has achieved tremendous progress in developing standards, guidance and codes of practice that address various food safety hazards. These standards have guided food regulators worldwide in shaping their food safety requirements for foods produced domestically or imported. Despite this progress, several challenges have been identified in relation with the application and implementation of Codex standards by domestic jurisdictions. Given that Codex standards tend to be outcome-based to ensure more flexibility and their possible adaptation to various scenarios encountered by food regulators and food industry operators around the world, operationalizing such measures can be challenging for the food*

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International Food Risk Analysis Journal  
Proceedings of the Special Session on Codex at the  
China International Food Safety and Quality Conference



## Codex Alimentarius Commission at 50: Major Achievements and Challenges Ahead

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<sup>1</sup> Director General, Food Directorate, Health Canada  
Vice Chairperson Codex Alimentarius Commission, 2011-14

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### Executive Summary:

For 50 years, the Codex Alimentarius Commission, established by the United Nations' Food and Agriculture Organization (FAO) and the World Health Organization (WHO), has worked collaboratively to develop and adopt international science-based food safety and quality standards and guidelines to protect the health of consumers and ensure fair practices in the international food trade. During that time, the Codex Alimentarius Commission also established a rigorous risk analysis paradigm comprised of risk assessment, risk management and risk communication activities, which has helped ensure the integrity and uptake of food standards by domestic food regulators worldwide.

Codex standards, guidelines and codes of practice have proven to be instrumental to the international community in the protection of human health by managing and mitigating chemical, microbiological and nutritional food safety risks through the establishment of standards and guidance. Some of these standards, guidelines and codes of practice have been in response to such issues as the identification of potentially hazardous chemicals present in food resulting from food processing practices, infant illness due to consumption of contaminated powdered infant formula, and food nutrition labelling requirements for saturated fats, sodium and total sugars as a means to provide consumers with important information to make

informed and healthy food choices. Codex has also demonstrated quick action to ensure fair practices in the food trade, such as its work undertaken to prevent the potential adulteration of foods by the chemical melamine and the potential proliferation of multiple, divergent standards by various domestic food regulatory bodies which could have been disruptive to international trade.

It is important to recognize that the priorities and activities of Codex have and must continue to evolve in accordance with the changing global food landscape and shifting international priorities. Five significant challenges facing Codex going forward will include: the continued relevance of Codex standards to ensure they address current and emerging issues; the sustainability of resources to support Codex standards development, including the continued availability of the Codex Trust Fund to support developing countries' participation in the Codex process and the availability of sound scientific advice upon which risk management decisions are based; effective participation and contributions from an engaged membership, particularly developing countries; continued implementation of effective and innovative work management processes to ensure operationalization of procedures established in the Codex Procedural Manual and efficient management of daily activities; and maintaining consensus in its decision-making. Codex values and principles are pillars that will continue to support the organisation to evolve, adapt and stand the test

Int Food Risk Anal 1, 2014, 4:10, Proceedings of the Special Session on Codex at the China International Food Safety and Quality Conference 33



1. Respond to Challenges in Need of Guidance from Food Standards : Innovation of Food Products and Processes
2. Review Standards Development Process to prevent / mitigate process



**\$5,000 USD per minute**

**CODEX 50**  
ALIMENTARIUS 1963-2013



# Opportunities in Food Standards Development

## 1. Address Innovation in food production with Timely Guidance :

### ❑ New sources of nutrients and proteins require Guidance in Safety Assessments and Conditions of Access to the market

- Insects, Algae, Seaweed, Rapeseed, etc. have the slowest rate in moving through approval Process

- *Safety of Novel Protein Sources (Insects, Microalgae, Seaweed, Duckweed, and Rapeseed) and Legislative Aspects for Their Application in Food and Feed Production M. van der Spiegel, M.Y. Noordam, H.J. van der Fels-Klerx, Comprehensive Reviews in Food Science and Food Safety, Volume 12, Issue 6, November 2013 662–678*

- Attempt to Harmonize Approach for Novel Food Risk Management

# Opportunities in Food Standards Development (2)

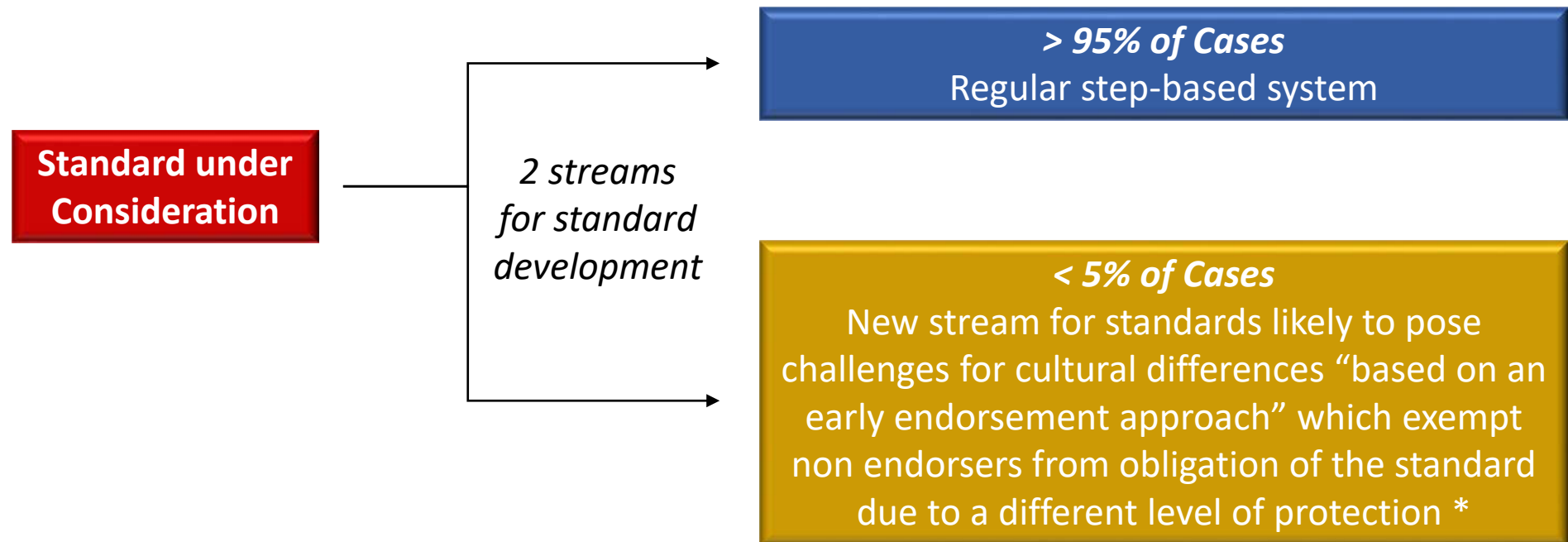
## 2. Level the Playing Field in Adopting Preventive Food Regulatory Measures

- Several Regulatory Measures in Developing Nations are applied with a strong Emphasis on end product testing
- Impact of Applying FSMA and FSMA-like rules still not understood
- Propagate “outcome-based” approaches in regulating food safety



# Opportunities in Food Standards Development (3)

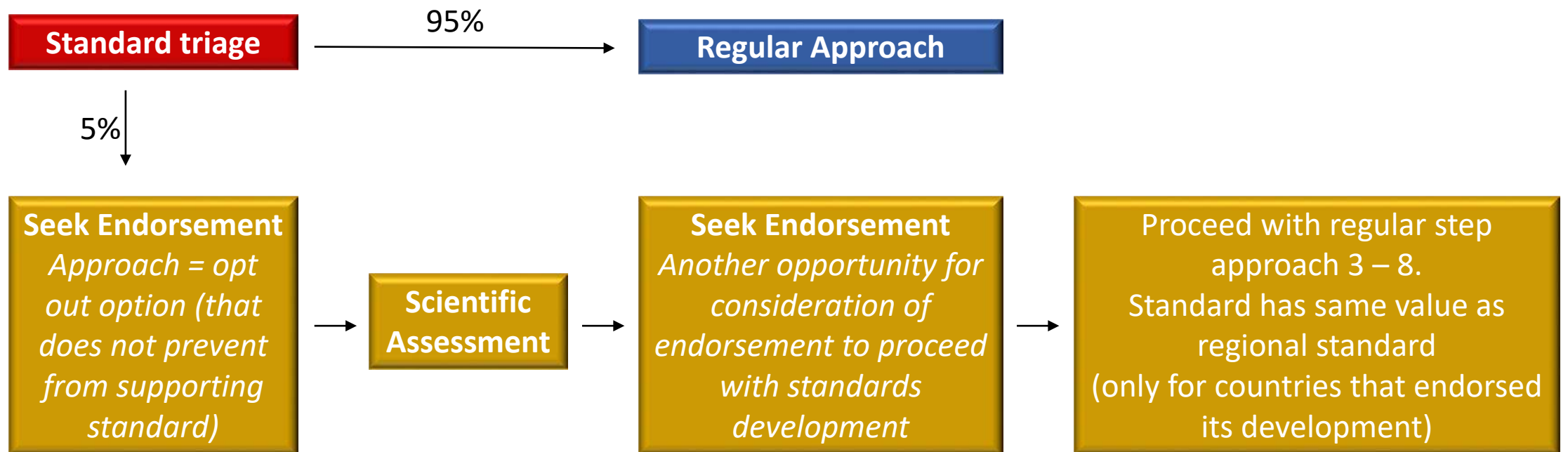
3. Re-think approaches for processes managing development of some international standards that may be impacted by cultural differences



\* Would exempt non endorsers from obligation of the standard due to a different level of protection

# Novel International Food Standards Development

- Approach for “Specified Cases” – discussed amongst CCEXEC members between 2010-2014





# Easier Said than Done

- ❑ These measures require support with adequate resourcing, in particular for scientific assessments
- ❑ Measures require leadership and commitment to move towards a new direction from Codex Membership





# ILSI and its Membership Can Drive Change

# Various Areas Warrant Attention....

To address Drivers of Change

- ✓ Antimicrobial Resistance: Moving from Risk Assessment to Risk Management options (in relation with food uses)
- ✓ Food Fraud: Early Detection, Prevention and Mitigation
- ✓ Labeling Approaches to Profile "Food" based on Nutrient Content
- ✓ Addressing Allergen Management : Existing Allergens and Possible new allergens associated with Novel Foods / Ingredients
- ✓ Assessment and Management of New sources of Nutrients (Proteins)
- ✓ Assessment and Management of Bio-fortification: Foods to address targeted areas of malnutrition
- ✓ Assessment of Novel Processes to support a more resilient agriculture and food sector (to climate and other considerations)



Food Standards (or the lack thereof) should not be an impediment .....



# ILSI Membership can Drive :

## □ Issues to the Forefront of International Standards Development Process:

- Discussion of Priorities for Codex Committees (Intervention with relevant governments / Codex members)
- Proposal of New Work Projects relevant to constituency
- Providing Data and Support to Resourcing International Assessments
- Support Codex leadership to implement change





