

Safe Food Fair Food - Food safety in informal markets

Erastus K. Kang'ethe,
Department of Public Health
Pharmacology and Toxicology
University of Nairobi

Food Security vs Food Safety

- Food security exists when all people at all times, have physical and economic access to sufficient, safe and nutritious food to meet dietary needs and food preferences for an active and healthy life (FAO 1996- Rome declaration)
- Food safety are the conditions which ensures that food will not cause harm to the consumer when prepared and/or eaten according to their intended use

Food Security vs Food Safety

- Food safety involves conditions and practices that preserve the quality of food to prevent contamination and food borne illnesses
- Food security is the **quantity, accessibility and affordability** while safety is the **quality**

WHY ANIMAL SOURCE FOODS?

- Livestock production is growing rapidly, which is interpreted to be the result of the increasing demand for animal products.
- Global production and consumption of meat will continue to rise, from 233 million metric tons (Mt) in the year 2000 to 300 million Mt in 2020, as will that of milk, from 568 to 700 million Mt over the same period. Egg production will also increase further by 30% (Delgado et al 1999).

WHY SAFETY OF ANIMAL SOURCE FOODS?

- Approximately 75% of recently emerging infectious diseases affecting humans are diseases of animal origin (HIV, Avian Influenza; RVF, Dengue, Ebola)
- Approximately 60% of all human pathogens are zoonotic.

THREAT TO HUMAN HEALTH

- 1918-1919 Spanish flu – 50-100 million people
- 1990-2000s – SARS, HPAI, H1N1 threat of Emergence of infectious diseases – Zoonosis
- 1,415 human pathogens – 62% are of animal origin (Cleaveland et al 2001)
- Jones et al. 2008 – between 1940 and 2008 in the US – 335 emerging infectious diseases – 75% wild species origin.

Costs of emerging infectious diseases

- Apart from impacts on human health, zoonotic diseases have enormous economic losses
- UK, 1990- 2008 BSE cost the economy \$7 billion (Pearson, 2008)
- SARS outbreak cost Canada and East Asia \$40-50 billion (Naylor et al 2003)
- Outbreak of Rift Valley fever in Kenya 2006, was estimated cost to the economy \$32 million (Karl Rich and Wanyoike, 2010)

Costs of emerging infectious diseases

- WHO (2005) reported that 1.8 million people died from food borne diarrheal diseases – salmonellosis, campylobacteriosis, *Escherichia coli*
- WHO estimated that food borne pathogens cost US economy \$35billion in 1997 (WHO 2007)
- Food safety (microbial, parasitological, chemical contaminants) through food supply chains are a real danger to human health *E. coli* O104:H4.

SAFE FOOD FAIR FOOD

- About 80% of the animal-source foods are distributed through informal markets without adequate safety inspection.
- Adapts risk-based methods for food safety in informal markets.
- Project objective build capacity in Risk analysis using the Codex Alimentarius model

SAFE FOOD FAIR FOOD



SAFE FOOD FAIR FOOD

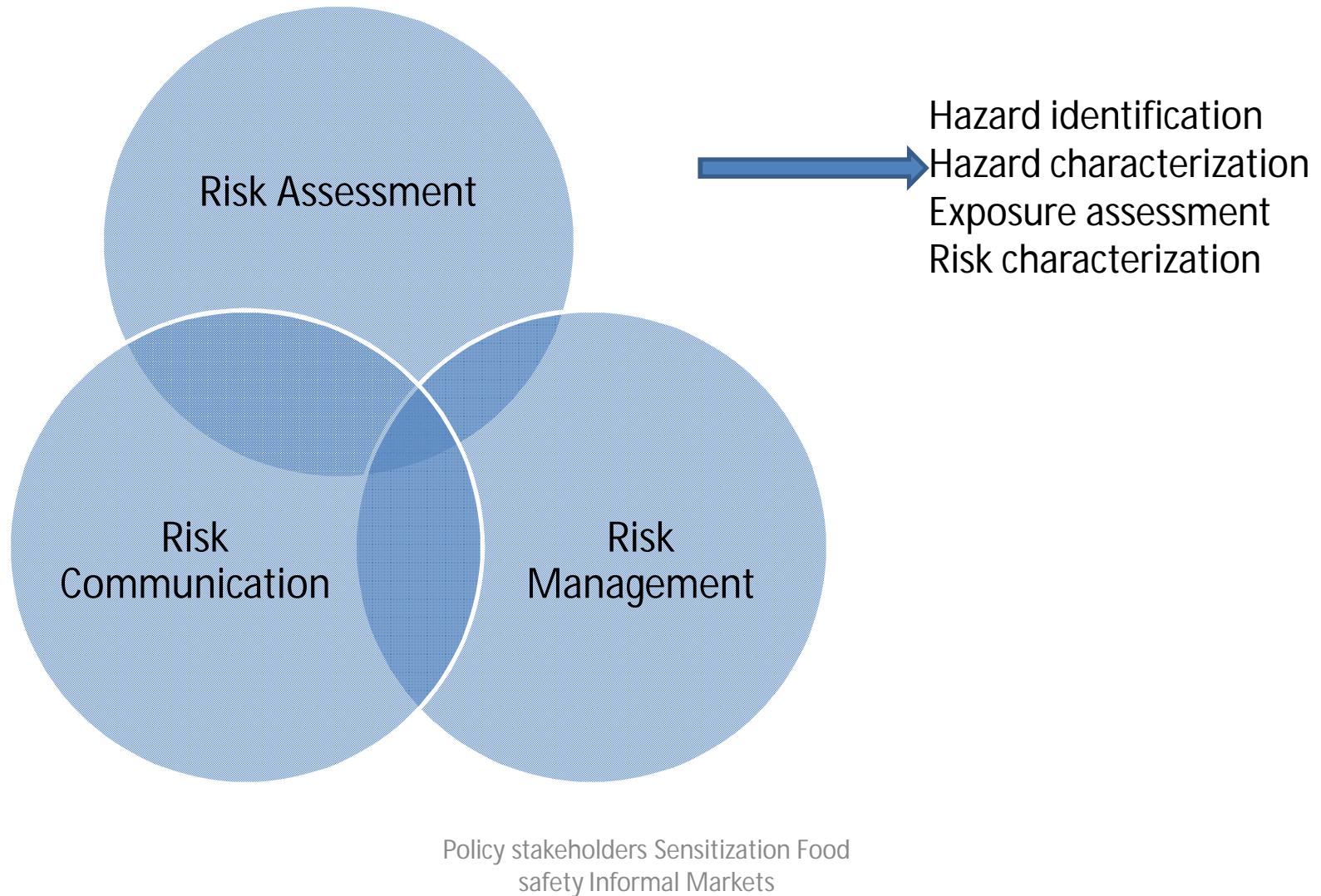
- The strategy adopted was risk-based approaches that are the gold standard for food safety management in developed countries.
- New risk-based approaches try and find out if there really is a danger to human health and if so how big is it and what can be done about it.

Hazard \neq Risk

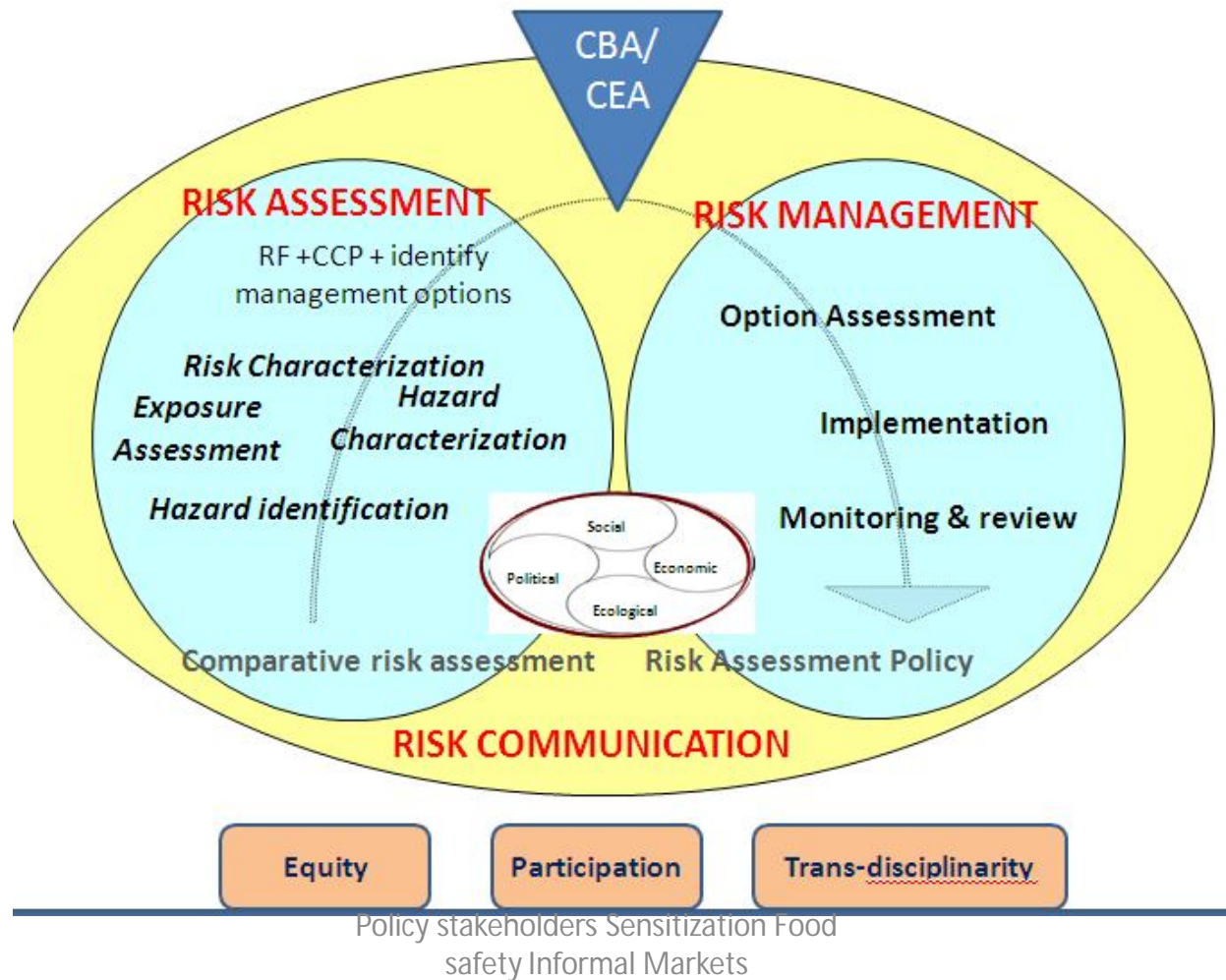
Risk = Hazard \times Probability

Policy stakeholders Sensitization Food
safety Informal Markets

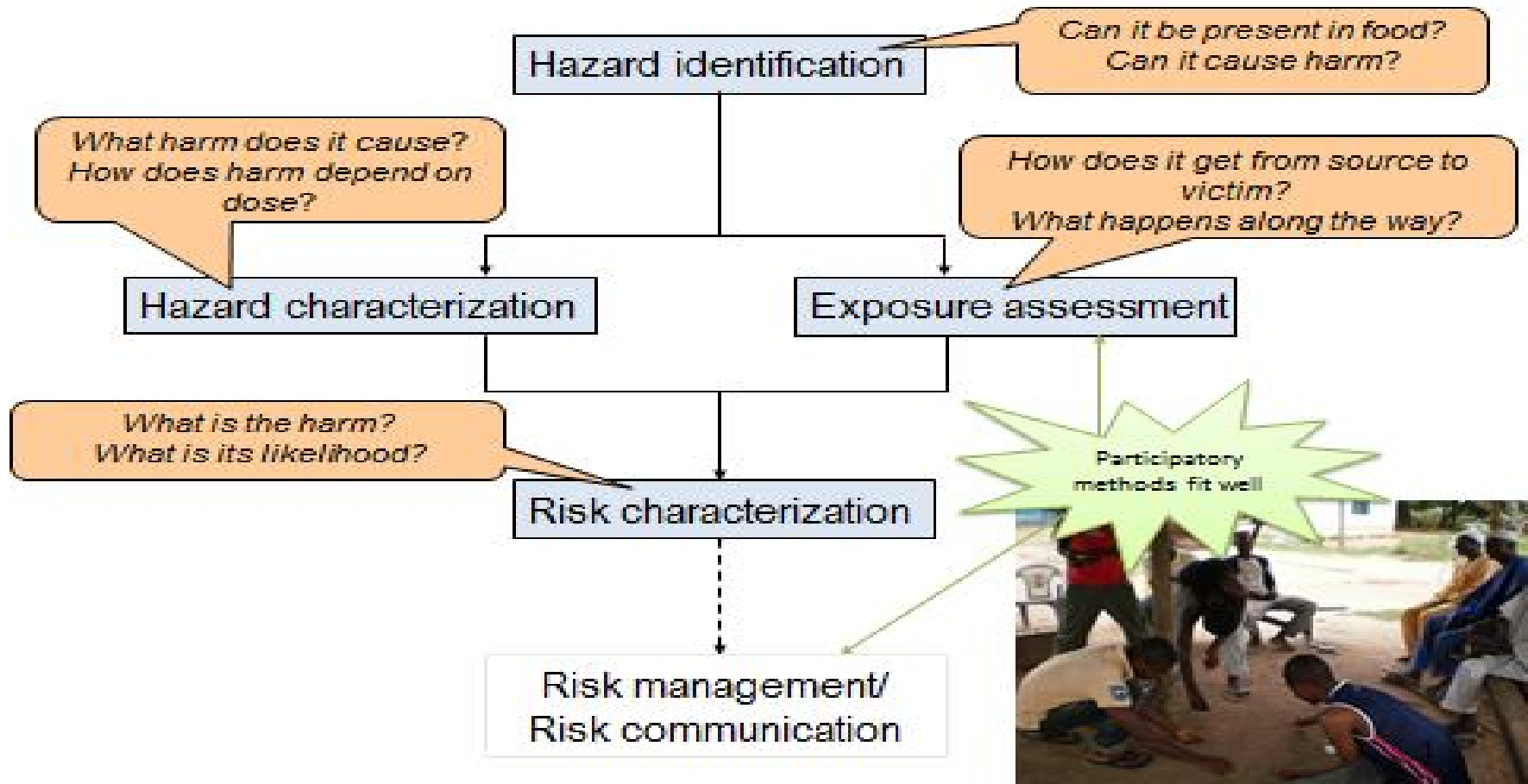
Risk Analysis - Codex



Proof of concept of “Participatory Risk Analysis” in informal value chain



PARTICIPATORY RISK ANALYSIS



SAFE FOOD FAIR FOOD

- Linking food safety and economic assessment in five value chains in four countries: dairy in Tanzania; fish and pigs in Uganda; and small ruminants in Mali and Ethiopia.
- Engaging the RECS (SADC, ECOWAS and EAC) on food safety of informal markets

WHY INFORMAL MARKETS

- Informal - Origin from 1970's census classification in Africa – employed, unemployed and not active.
- Keith and Hart in China showed that the unemployed, non active were involved in economic activities not included for revenue collection – informal sector.
- Jenkins and Harding (1989) called it hidden economy.
- Accounts for 39% of GDP in SSA

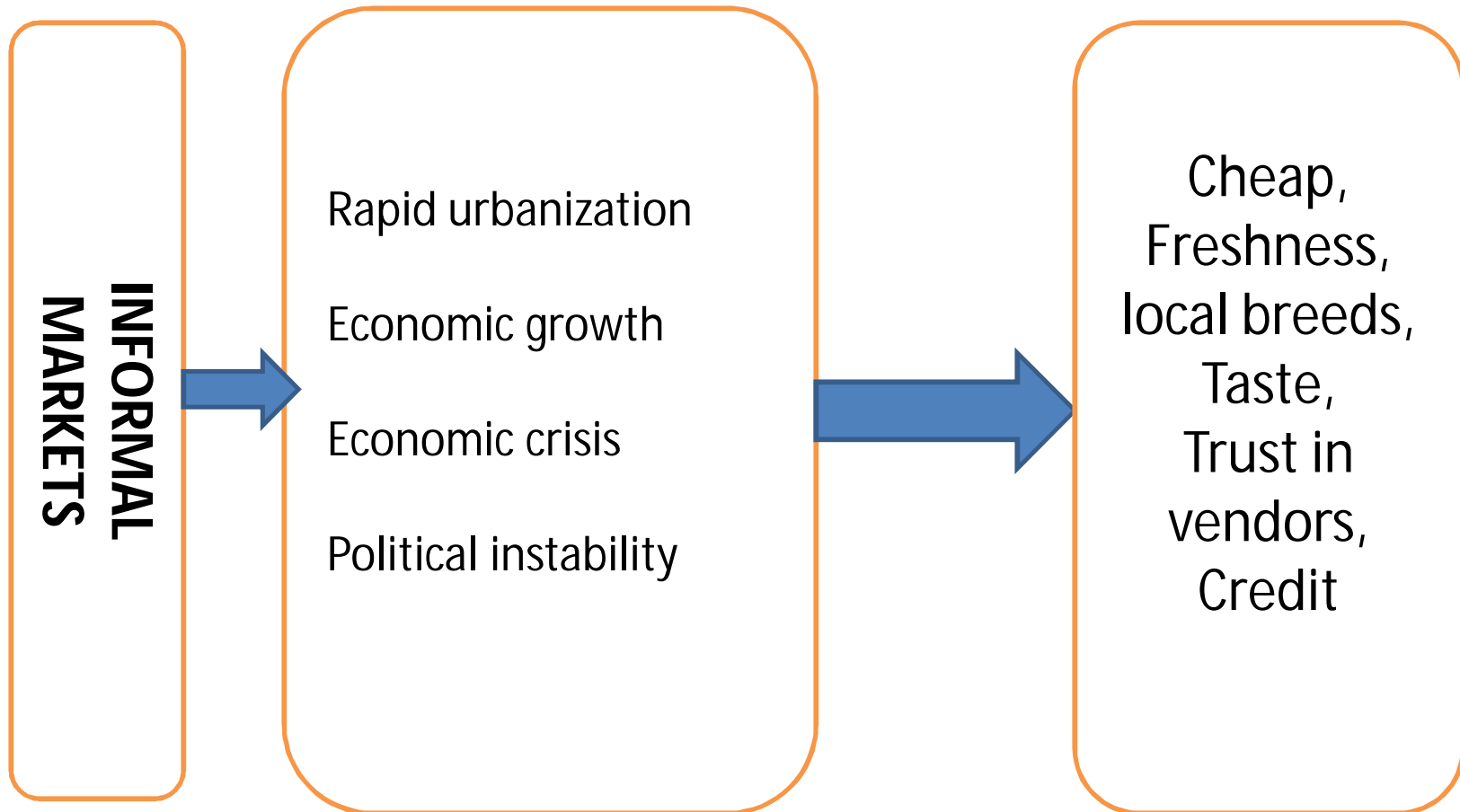
ROLE

- Contribute to food security
- With convenient volumes, locations and price(Kadogo economy)
- Employment and household incomes
- Accommodates formal low wage earners

FOOD SAFETY

Drivers

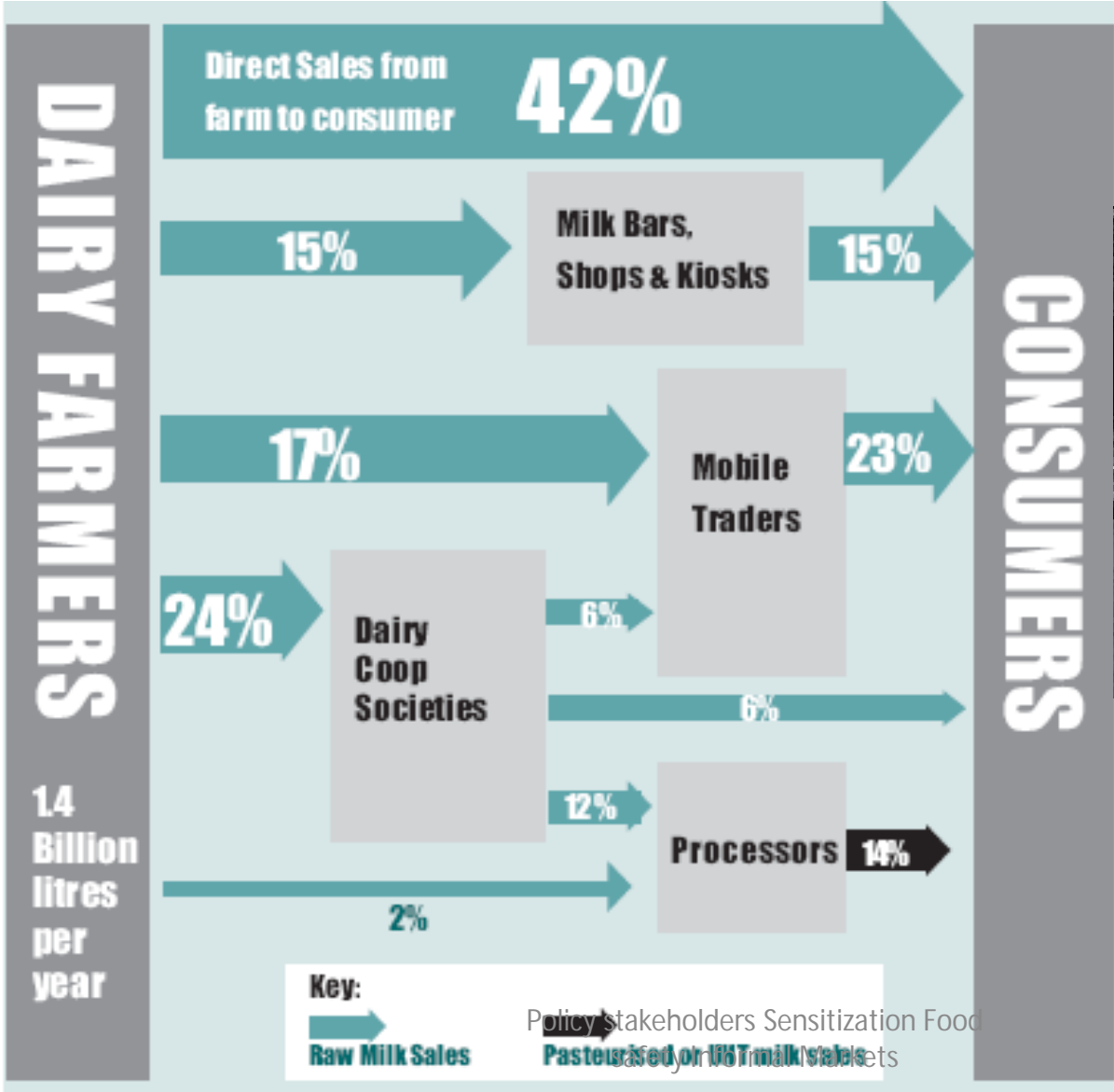
Benefits



CHARACTERISTICS OF INFORMAL MARKETS

- Lack of specialization
- Low capital investments
- Combination of production and consumption
- Non payment of all or some of the taxes
- Innovations that are social
- Possibility of articulating with formal
- No regulation
- Visible Players - Street vendors, small restaurants and caterers, urban agriculturalists

Milk channels KENYA



Policy Stakeholders Sensitization Food Safety and Quality
 asy and UST milk Sales

RISK

- About 80% of the animal-source foods are distributed through informal markets without adequate safety inspection
- Most of the people living in the SSA are exposed to a variety of food borne agents which can cause diarrhoea, fever, chronic wasting, abortions or even epilepsy and cancer.
- These infections can have severely negative impacts on the population, including a high infant mortality, low human productivity.

THINKING ALOUD

- How do we introduce food safety into this sector that is so important?
- What challenges do we have?
- Do we need to transform this sector from informal to formal?
- What risks do we run into if we did?
- What do we need in terms of evidence to allow us to transform the sector?
- Who should provide that evidence?
- What support do we need?

Acknowledgements

- SFFF 1 and 2 PI and all involved: -
 - ILRI Honeheim
 - Sokoine Free university Berlin
 - Nairobi Federal Institute for Risk ssesment
 - Mozambique Makerere
 - Pretoria BeCA
 - Ghana Worldfish
 - CSRS (CIV)
 - Mali

BMZ/GIZ FUNDING AGENCY23

A S A N T E S A N A

Policy stakeholders Sensitization Food
safety Informal Markets