### Food Safety and Urban Food Security in the Global South

Jodi Koberinski, Steffanie Scott University of Waterloo Zhenzhong Si Balsillie School of International Affairs

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### WATERLOO ENVIRONMENT

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 A research gap exists within food security in regards to the role food safety plays

- Having access to safe food is one of the prerequisites for maintaining food security WHO/FAO (2006:3)
  - Cities rely on food procurement elsewhere



### Ensured when there is a reliable *supply* of food of sufficient quantity and quality.

#### Dependant on:

- Domestic production
- Food stocks
- Imports
- Food aid

### Availability

Stability

#### Ensured when individuals & households have adequate resources to obtain appropriate food.

#### Dependant on:

- Political, economic, social factors .
  - Equitable distribution •
  - Markets / infrastructure
    - Affordability 

      Purchasing power

#### Access

### Food security

"Exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life".

(FAO, 1996)

#### Dependant on:

- Maintenance of all three pillars over time
- No risk of loss of supply due to economic, political or environmental factors

Ensured when there is *permanent* and durable access to food.

### WATERLOO

### Utilisation

#### Dependant on:

- Food safety •
- Food quality
- Nutritional knowledge
  - Proper preparation •
- Clean water / sanitation / healthcare •

Ensured when food is nutritious and can be adequately metabolised and used by the body.

### (Cawthorn and Hoffman 2015)

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- Microbiological, physical, chemical issues
- Local or indigenous knowledge about food safety is often codified, unrecognizable to the scientific process as knowledge



- Health & Wellness/ the public interest/ ecological health are missed in technical approaches to food safety
  - linear thinking vs systems thinking

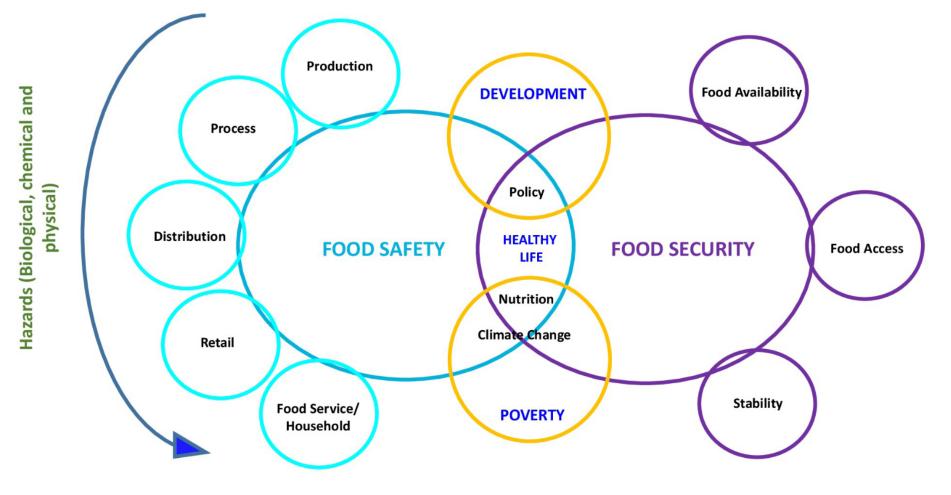


- Food scandals break trust in the food system generally, and in food governance institutions in particular
  - Hazard-based food safety assessment focuses
     on mere presence of a risk factor
  - Risk-based approaches assess the likelihood of harm from a given risk factor



# Growing Food Safety Issues in the Global South driven by:

- Rapid urbanization and the accompanying changes in diet - lost food ways
- Complex and lengthy supply chains associated with the globalized food system
- Pesticides, pollution, and illegal additives
   WATERION



Relationship Between Food Safety, Food Security & Development Mahmoud. 2017.



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## **Feeding Nine Billion**

- Industrialization and intensification pursued by governments in the Global South
  - Seen as an "imperative"
  - the response to food safety scandals— even when industrialization is a cause in the issue is greater industrialization



### **Case Studies**

### Melamine in Milk Avian Flu GMO Maize in Mexico



## Melamine Milk Scandal

- In 2008, Chinese milk processors added melamine to milk products including baby formula
- Dairy sector and government officials attempted to bury the scandal, while tainted milk products circulated



## Melamine Milk Scandal

- Response from the state to scale up and consolidate the dairy sector, with the belief that industrialization would solve the food safety threat
  - Led the Chinese government to reconfigure the country's food safety governance system, regs.
- Consumers organized but were silenced



## Avian flu outbreak 2001

 SE Asia outbreaks, including Cambodia, Thailand hid from markets for months

- Poultry and egg sectors in Asia devastated and 60 people died
- Birds taken out of small scale management systems, live birds were forbidden at market



## Avian Flu Outbreak 2001

- Habitat loss is driving animals into closer proximity to humans
- Outbreaks addressed by: surveillance, containment, vaccines and drug treatments
- Urban Food Security compromised in deference to food safety concern



## Mexican Maize and GMO Contamination

- Quist and Chapela (2001) found transgenic gene flow at low levels in Mexican maize
  - The Mexican government repeated the study and found transgenic gene flow had occurred
  - Industry worked to discredit critics much at stake



## Mexican Maize and GMO Contamination

- Different seed management systems result in different risks from transgenic contamination
- Models in food security and food safety research must include a socio-cultural lens for problem identification and for solutions



## **Reactions: Civil Society**

- Traditional knowledge can serve the cause of food safety, from food preparation to resource management
- Urban Alternative Food Networks (AFNs)
  - Organizing politically, with various success
  - purchasing power of urbanites



### **Reactions: Government**

 Improve enforcement of existing food safety laws and regulations as well as creation of new ones

Adopt local, regional or international food safety standards



### **Reactions: Private Sector**

- Establish/ adopt private safety standards and certification regimes (HACCP and other systems)
- Seek to control the narrative, respond with greater industrialization as the answer to problems inherent in the food system



### Conclusions

"The industrial food and farming model that systematically generates negative health impacts also generates highly unequal power relations. This allows powerful actors including the private sector, governments, donors, and others to set the terms of debate."

IPES (2017)



## Five Leverage Points to improve urban health outcomes:

- promoting food systems thinking
- re-investing in and prioritizing public research in the public interest
- bringing alternatives to light
- adopting the precautionary principle
- building integrated food policies under participatory governance



### Conclusions

- Power imbalances obscure food safety/ food security connections — hides real cost of food (IPES 2017)
- Urban planners play an important role linking food safety and food security (Si and Scott 2017)

