

# Food Safety and Informal Markets: Animal Products in Sub-Saharan Africa

*Monthly CGIAR-Uganda research seminar*

*IFPRI/IITA Kampala-Naguru, 6<sup>th</sup> May 2015*





**1. ILRI and CRP A4NH**

**2. Food safety & informal markets  
in sub-Saharan Africa**

# Large burdens of agriculture on human health

WHO 2012:

**56 million deaths per year**

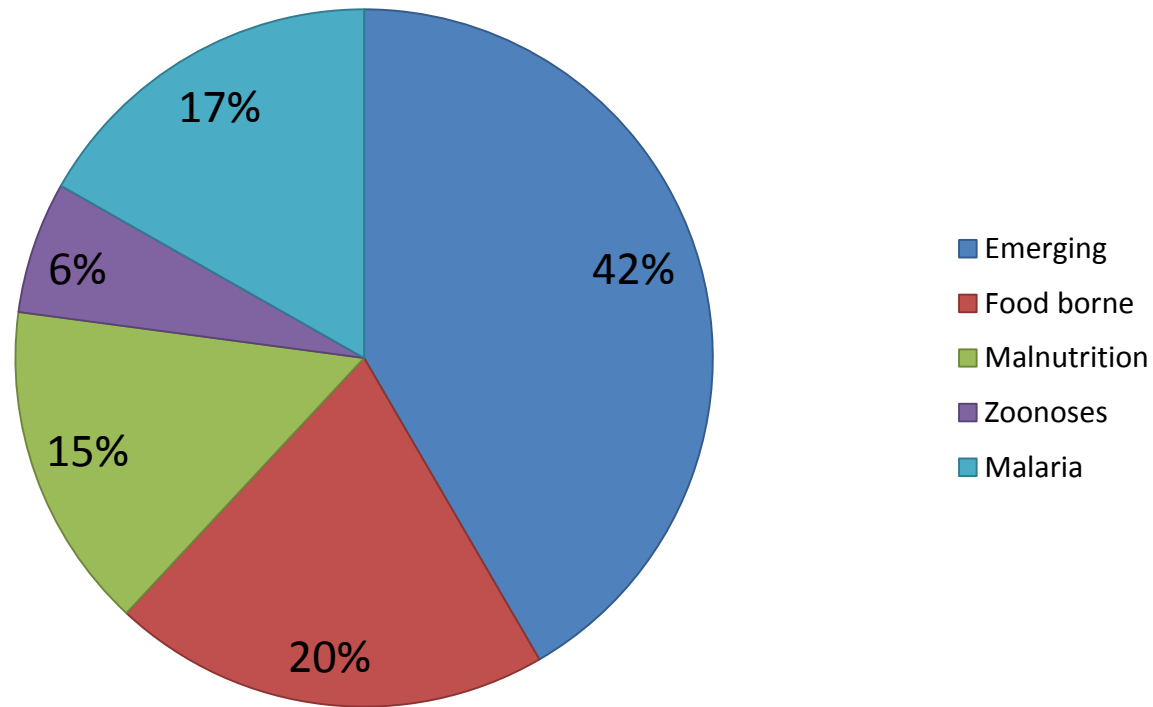
**38 million from non-communicable diseases**

**13 million from communicable diseases, maternal, neonatal and  
nutritional conditions**

5 million from injuries

3 mio deaths per year are associated with agriculture

# Large burdens of agriculture on human health



## Anti-poor:

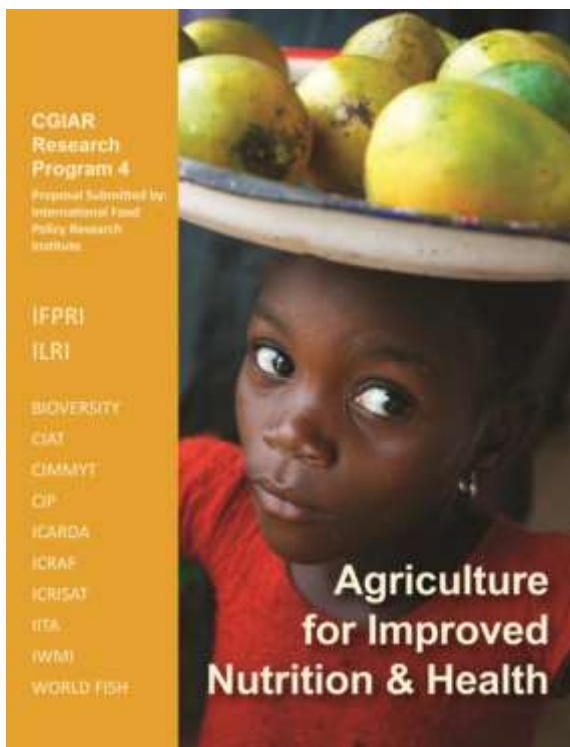
Almost all of these occur in developing countries

Zoonoses & FBD cost \$84 billion a year



## 4 components

- Value chains for enhanced nutrition
- Biofortification
- Integrated agriculture, nutrition and health programs and policies
- Prevention and control of agriculture-associated diseases
  - Emerging infectious diseases
  - Neglected zoonoses
  - Ecohealth/ OneHealth
  - Food borne diseases



<http://www.a4nh.cgiar.org/>

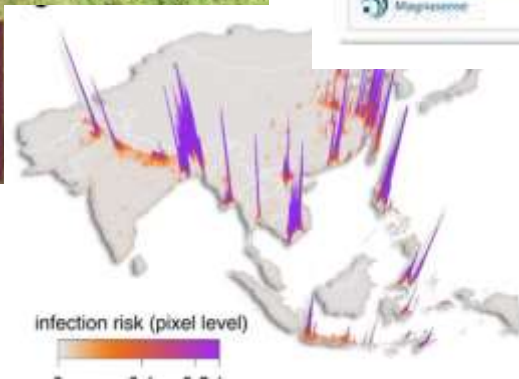
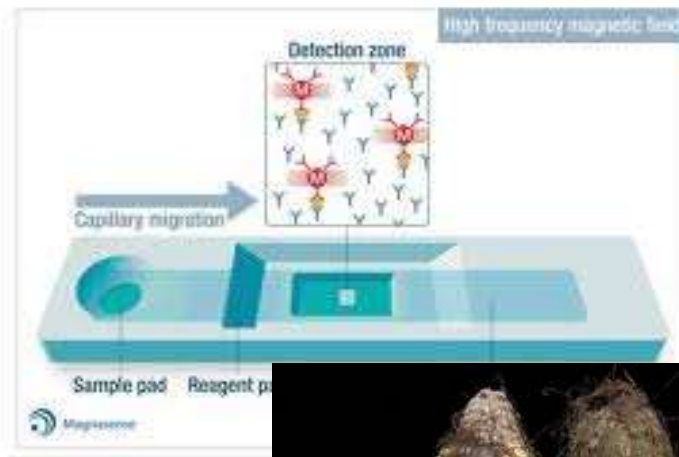
<http://aghealth.wordpress.com/>

# Approach ILRI FSZ program

- **Evidence:** Mapping, measuring, targeting
- **Technology:** diagnostics, vaccines, decision support
- **Impact:** Safe food in informal markets



Ebola risk assessment in the pig value chain in Uganda



# FOOD SAFETY AND INFORMAL MARKETS

Animal products in sub-Saharan Africa



Edited by  
Kristina Roesel and Delia Grace



# ILRI/BMZ "Safe Food, Fair Food" project

## 8 countries, 10 partners

**CSRS**  
Centre Suisse de Recherches  
Scientifiques en Côte d'Ivoire



Mali

Côte d'Ivoire



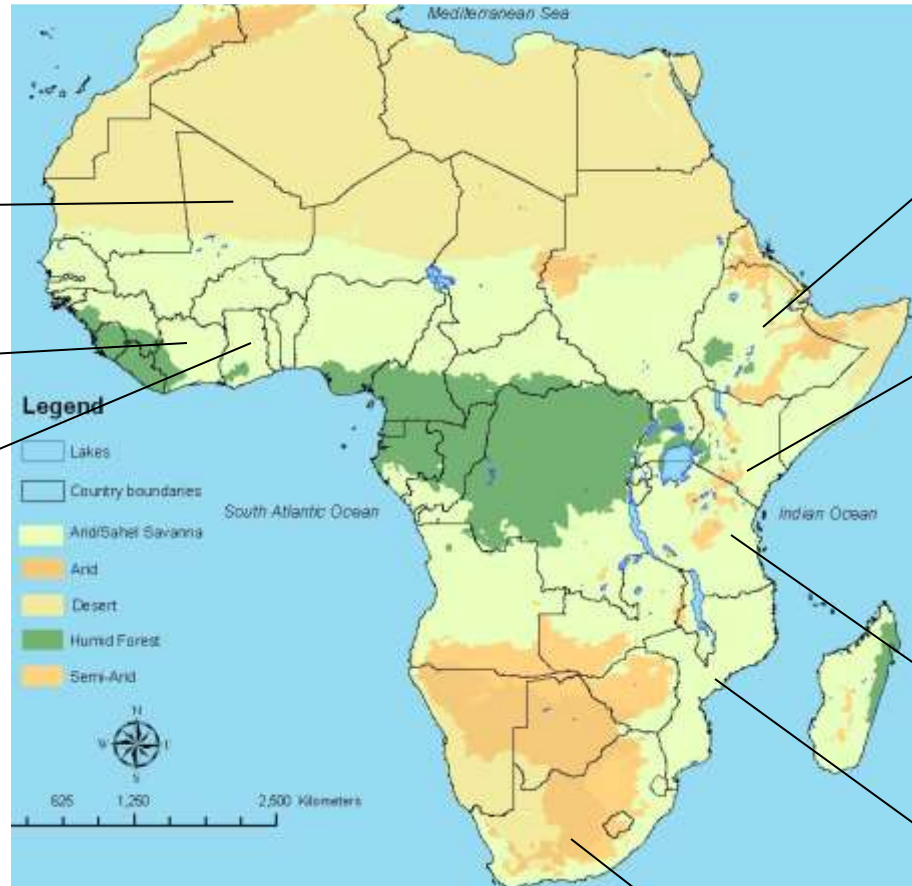
Ghana

Freie Universität Berlin



**BfR**  
Bundesinstitut für Risikobewertung

Rakuno Gakuen University  
酪農学園大学



Ethiopia



Kenya



Tanzania



Mozambique

South Africa



**giz**

**ILRI**  
INTERNATIONAL  
LIVESTOCK RESEARCH  
INSTITUTE

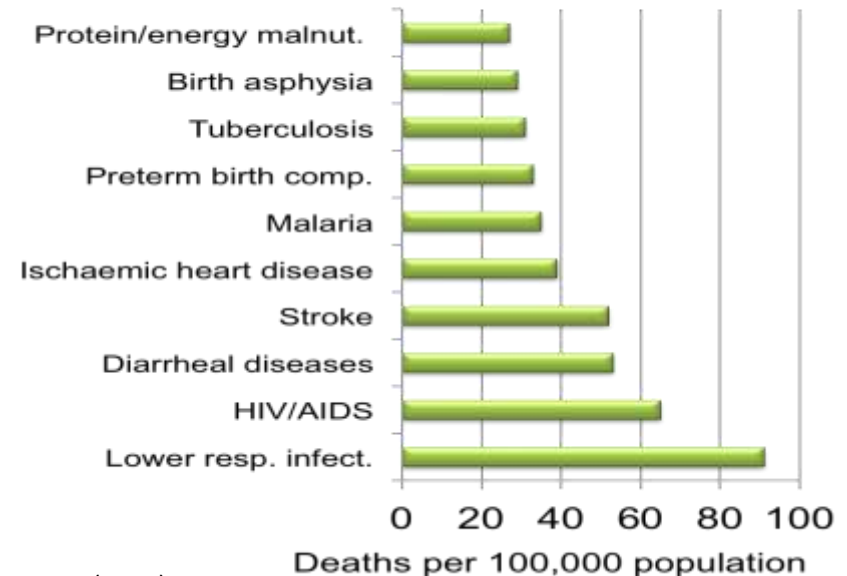


# Food safety in sub-Saharan Africa

- World wide per year >2 billion cases of diarrhea
- 760,000 children <5 die of diarrhea/ year
- Causes mostly water- and foodborne disease
- Animal source foods are single most important source of food borne disease
- In sub-Saharan Africa >80% of animal source foods sold through informal markets



Top 10 causes of death in low income countries (2012)



(WHO)

# 1. INFORMAL MARKETS

## major role in food security and safety

- Accessible, affordable and highly preferred
- < 39% of the national GDP
- Involve many actors
- No taxation, no licensing, no inspection
- Prone to activities that may compromise safety
- Perceived to be unsafe



































PASKALES PO...  
SAZA - MANKA  
TUB OTSISESI  
0774559







## 2. HAZARDS are common but don't always translate into RISK

- Hazards = any agent that can cause harm
- Risk = probability of that harm to occur + consequences
- Food safety management in developing countries is hazard-based and therefore inefficient

### Mwondha case: Lawyers plan to meet on June 29

BY ANTHONY MURRAY  
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KAMPALA Lawyers in a case involving the late Edith Mwendha and her estate have filed a motion for summary judgment, yesterday, informing the court that they have accepted the necessary documents, they intend to only challenge the hearing.

Mr James Nsububa, Mr George Ombwani and Ms Mwendha, made the revelation to the presiding High Court Judge, Mr John Mwangi, on the progress of the case.

"My Lord, we have as far as cleared, prepared, submitted and filed all the necessary documents. We are yet to have our hearing dates. I need to show my client, (Mwendha) documents got from Mr Nsububa yesterday (Monday)," Mr Ombwani said. Mr Nsububa in response said, does not object to any documents given to him, before serving, but only cross examine on them.

**Outstanding notes**  
The judge set June 29 to be the two parties sort out any outstanding issues before they had a hearing date.

Come to this case is that Mwondha allegedly earned a very meagre for judges because was higher while at the same time taking all expenses as fees because was higher than that of judge. Ms Mwondha denied all allegations.

Earlier, Mr Nsububa said to Justice Mwangi that it is a case of defamation, he is never insisting to sue out most meetings scheduled to be 23.

Mr Nsububa said the petition does not deny that the two parties in content added that the articles were ten out of qualified articles involves some parliament members and that the article made were a fair comment.

### SEEKING JUSTICE

Ms Mwendha, currently the High Court resident judge, says she is not sure if she will sue any of the other judges who are publishing any further articles against her.



Pork chopped ready for preparation. Kampala Capital City Authority team has found that most pork abattoirs around the city do not meet the required standards, putting the health of many people at risk. (MURRAY)

# Most pork in Kampala is unsafe - health experts

**Health risk** The KCCA had to issue a ban on the sale of pork in the market because of the health risks posed by the meat.

BY ROBERT MWANGI  
mwangi@monitor.co.ug

KAMPALA Majority of pork supplied in Kampala for human consumption is contaminated, the Kampala Capital City Authority public health department has warned.

Dr Emilia Ahimbisibwe, the KCCA senior veterinary officer, said the pork sold in the city is increasingly becoming risky for human consumption, citing the reported anthrax-like nature in which meat is being slaughtered, transported and prepared.

"A big percentage of pigs slaughtered in Kampala are not cleared for human consumption," Dr Ahimbisibwe told journalists in Kampala yesterday.

He warned that local pork consumers face the danger of contracting epilepsy or running mad among other related ailments.

"The city is littered with illegal pork abattoirs in various suburbs including Nsambya, Kamwempy Zone, Kinawataka and Wambuzi in Lubaga Division," he said.

Dr Ahimbisibwe said pork contains tape worms which cause epilepsy when consumed without excellent preparation and warned consumers against feasting on meat which is not thoroughly cooked.

### INSPECTED FIGURES

**50 percent**  
The percentage of joints that KCCA says it gets to inspect, of the 200 slaughtered daily.

"We are drafting new laws to guide butchery attendants and animal transportation to end this food insecurity in the city," he said.

Pork is a delicacy enjoyed by a vast number of people who purchase the meat of different pork joints around the city.

In 2008, a government health team raided and closed five popular pork joints in Kampala's suburbs, arresting 14 owners in the melee.

The team of 20 officials who included policemen, city authority law enforcement personnel and inspectors from the Ministry of Agriculture raided pork joints in Nsambya, Makindye and Luzira.

A dozen pigs were carried away and more than 800 kilograms of fresh pork impounded.

Meanwhile, as many as 900 cows are slaughtered every day in Kampala and yellow pork, beef is usually consumed at the different abattoirs due to poor hygiene.

# WAR ON PIGS



**KCCA Vows To Abolish Pork Business**

**Bujagali Energy Project; Energy Ministry has Shs366.91bn as unspent money**

**Bujagali Energy Project; Energy Ministry has Shs366.91bn as unspent money**

By Hope Muhairwe

**KAMPALA CAPITAL City Authority has opened a fresh war on pork joints claiming that most of them are dirty and operate illegally.**

All pork supplied in Kampala for human consumption is contaminated, KCCA public health department said, threatening to close all pork joints around the city. Economy Watch spoke to some abattoir owners in different parts of the city and this is what they said: "We are so frustrated over this warning because this has

put our business at risk since being the job that helps us earn income. Butchers said they make awesome profits from the business ranging from Shs8,000 a kilo. Emilia Ahimbisibwe, a KCCA Senior Veterinary Officer said that pork sold in the city is increasingly becoming risky for human consumption, citing the reported unhygienic nature in which meat is being slaughtered and prepared. "A big percentage of pigs slaughtered in Kampala are not cleared for human consumption," Ahimbisibwe said. He threatened that loyal pork consumers face

the danger of contracting epilepsy or running mad among other related ailments. "The city is littered with illegal pork abattoirs in various suburbs such as Bweyogerere commonly known as Ekimezza, Nsambya-Kamwempy Zone, Kinawataka and Wambuzi in Lubaga Division and many more," he added. He explained that pork contains tape worms which cause epilepsy when consumed without excellent preparation and warned consumers against feasting on meat which is not thoroughly cooked. Ahimbisibwe said they are drafting new laws to guide

butchery attendants and animal transportation to end this food insecurity in the city. A team of officials who included Policemen, KCCA law enforcement personnel and inspectors from the Ministry of Agriculture raided pork joints in Nsambya, Makindye and Luzira. A dozen of pigs were carried away and more than 200 kilograms of fresh pork impounded. Pork is a delicacy enjoyed by a vast number of people who purchase the meat at different pork joints around the city. In the recent years, it has become a profitable business to venture into.



# Codex Alimentarius Commission framework for food safety risk assessment





### 3. Informal markets are not necessarily dangerous, nor formal safe

- Informally marketed food often safe
- Biggest challenges: improper harvest and post-harvest handling, often because of lack of prerequisites
- Business-oriented attitudes are a major risk to food safety
- Some risks in both markets are underestimated because they do not cause immediate harm





## 4. Farmers, traders and retailers are risk managers in informal markets

- Contamination of food may occur at any stage in the food chain
- Risk pathway analysis helps identifying CCPs
- Everybody handling and benefiting from the product, must take responsibility
- Interventions often simple but lack prerequisites

**Cow**

**Farm**

**Path**

**Consumer**

|       |       |
|-------|-------|
| T=2   | C=0   |
| F=1.8 | S=8.6 |
| W=0   |       |

**Tara**



Other cows (7)

**Farm 1**  
84 litres



|     |     |
|-----|-----|
| 90  | 0   |
| 3.6 | 7.8 |
| 6   |     |

|     |     |
|-----|-----|
| 105 | 0   |
| 3.6 | 8.0 |
| 6   |     |

**Vendor 1**  
20 litres



Co-operative  
50 litres



**Self**  
4 litres

|     |     |
|-----|-----|
| 410 | 0   |
| 3.0 | 5.9 |
| 30  |     |



**Near HH BC**  
1 litre

**Near HH NKD**  
0.5 litres

**Far HH YA**  
1 litre

**Far HH B**  
0.75 litres

25 other households  
16.75 litres

Households- 5/6  
10 litres

|     |     |
|-----|-----|
| 311 | 0   |
| 3.8 | 7.5 |
| 10  |     |

|     |     |
|-----|-----|
| 450 | 21  |
| 2.4 | 4.3 |
| 35  |     |

|     |     |
|-----|-----|
| 324 | 25  |
| 3.3 | 5.4 |
| 24  |     |

**KEY**

|  |                                  |
|--|----------------------------------|
| Total plate count<br>Standard: < 5,000 | Coliform count<br>Standard: <0.1 |
| Fat<br>Standard: 3.5                   | Solids not fat:<br>Standard: 8.5 |
| Added water                            |                                  |

HH

Household



Water added



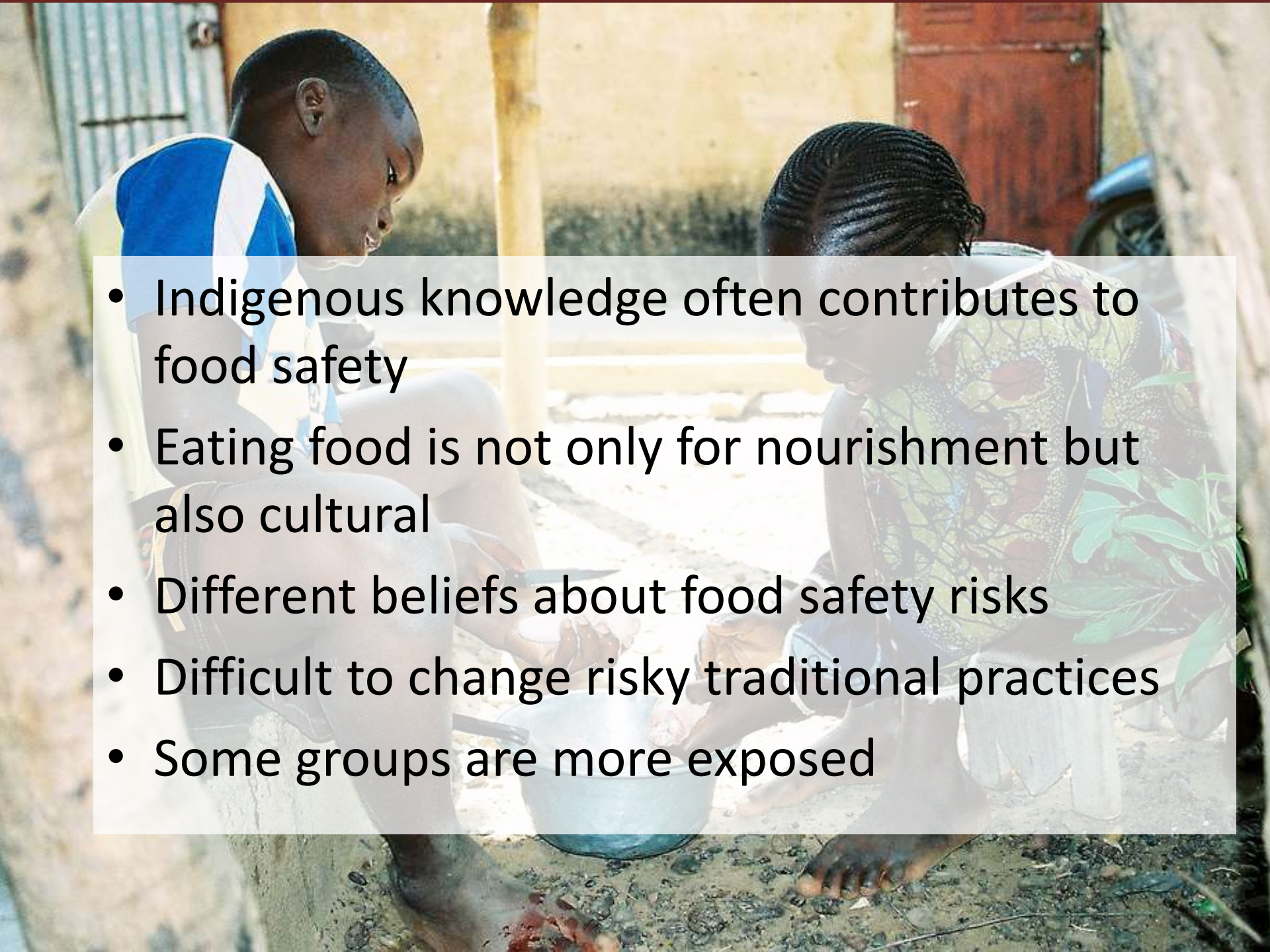
Possible Critical Control Point



## 5. Understanding values and culture is crucial for managing food safety in informal markets






- 
- A young boy in a blue and white striped shirt and a woman in a patterned dress are sitting on the ground, preparing food in a large blue pot. The boy is on the left, looking towards the woman on the right. They are in an outdoor setting with a yellow wall and a red door in the background. A motorcycle is partially visible on the right. The ground is dirt and there are some plants in the foreground.
- Indigenous knowledge often contributes to food safety
  - Eating food is not only for nourishment but also cultural
  - Different beliefs about food safety risks
  - Difficult to change risky traditional practices
  - Some groups are more exposed



## 6. Food safety management also requires a gender perspective



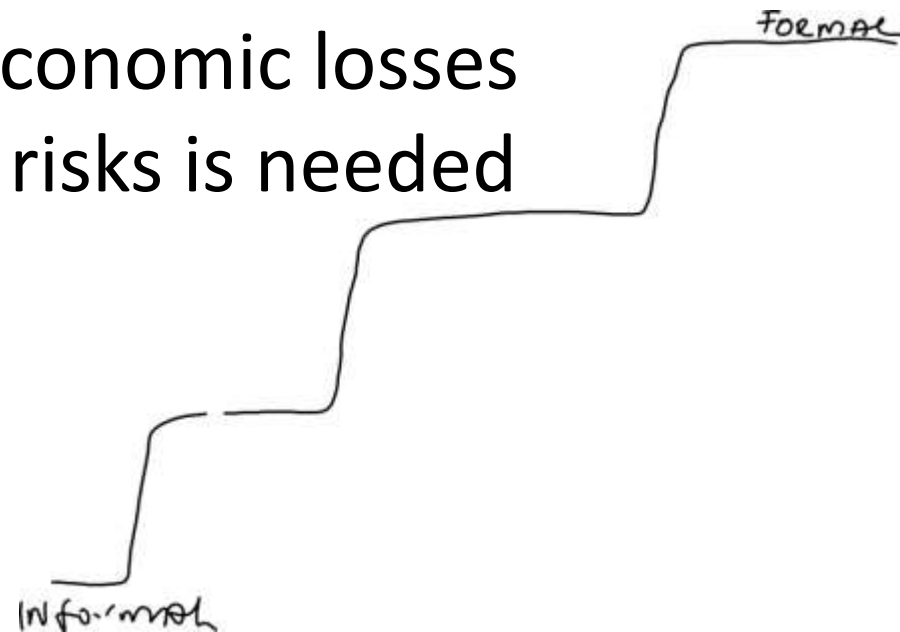


- 
- A woman wearing a white headscarf with orange floral patterns and a green and yellow patterned wrap is kneeling on the ground, milking a white goat. The goat is standing in front of a wall made of yellow mud bricks. The woman is holding a wooden bucket to collect the milk. The scene is set in a rural, traditional environment.
- Men and women dominate/are excluded from different segments of the food value chains
  - Different benefits, different risks
  - Different vulnerabilities (YOPIs)
  - Informal markets are very important to women's livelihoods



## 7. Efforts in managing food safety in informal markets must be pro-poor

- Poor more prone but cannot afford to fall ill
- Risk management needs training, skills development and prerequisites
- Linking formal and informal markets
- Impact assessment on economic losses and gains of food safety risks is needed



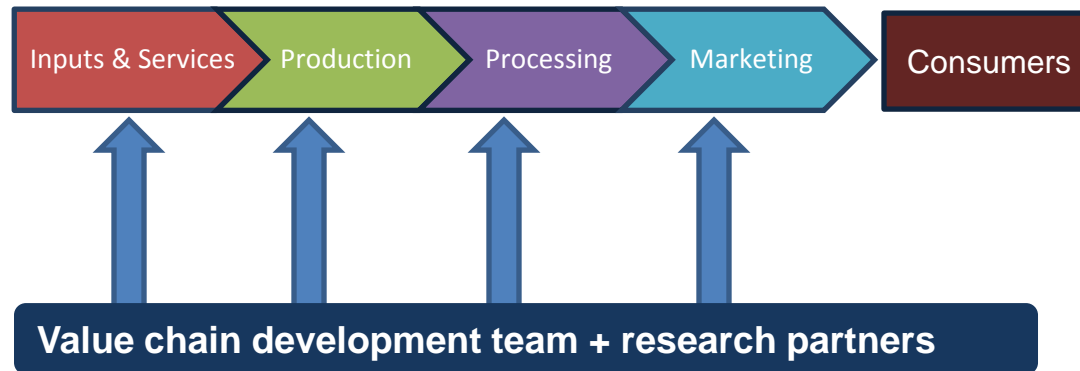
# Summary

- Informal markets are vital for food security and economies in SSA
- Informally marketed ASF is often not as dangerous as perceived
- Participatory methods useful in closing data gaps
- interventions should be risk-based and incentive-based



# Outlook: integrated research with CRP L&F “more meat, milk and fish for and by the poor”

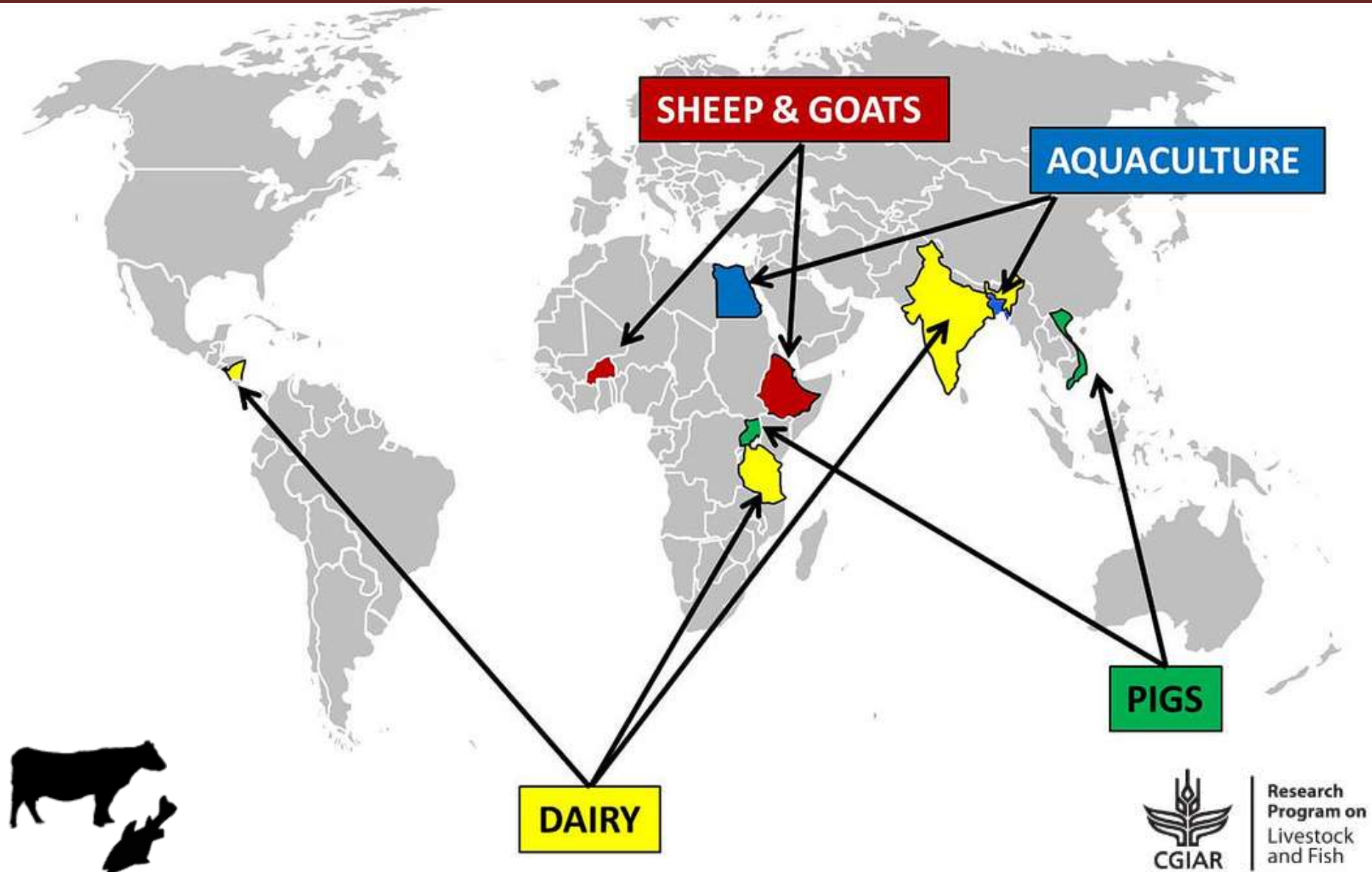
**R4D integrated to transform selected value chains  
In targeted commodities and countries.**



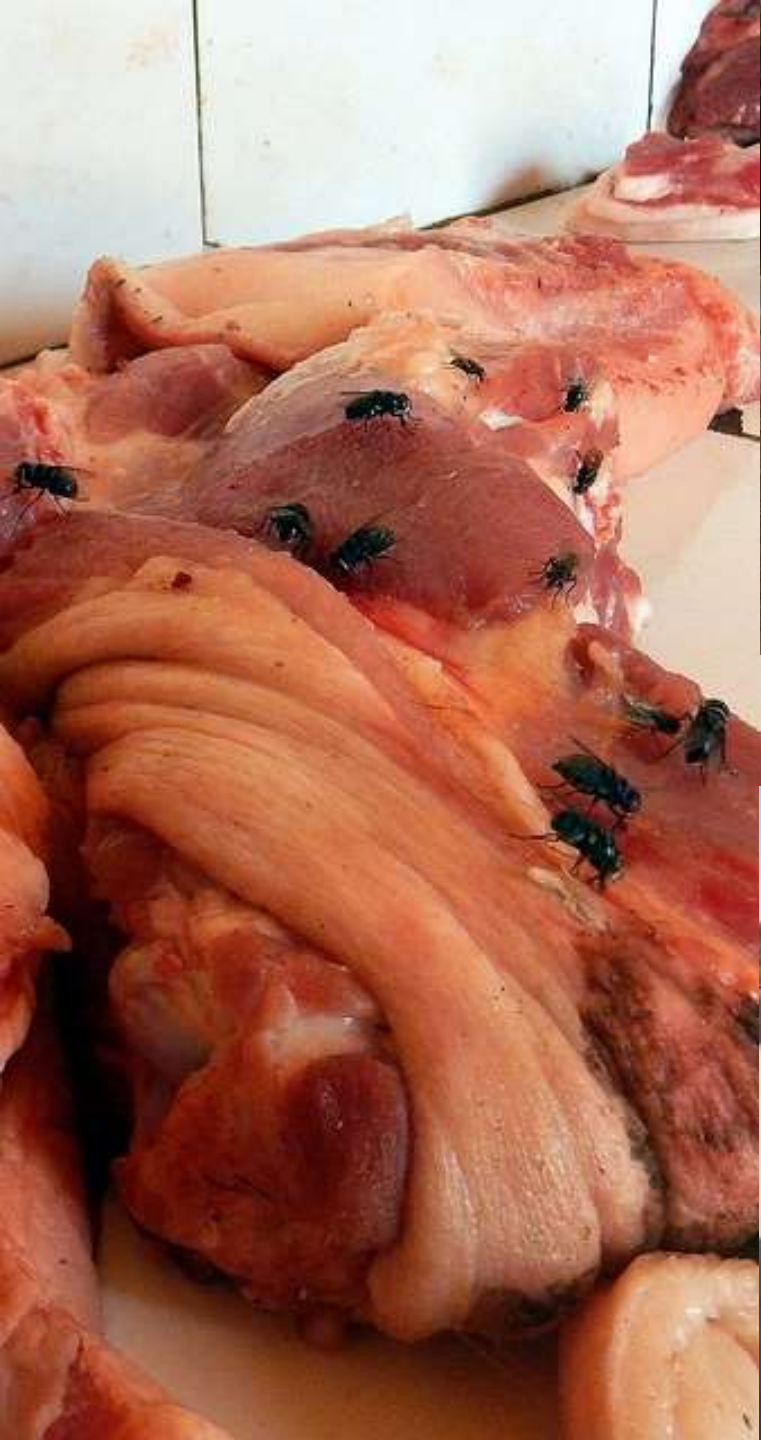
*To sustainably increase the productivity* of small-scale livestock and fish systems to increase the availability and affordability of animal-source foods for poor consumers.



# 9 target livestock & fish value chains







# THANK YOU!

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Better lives through livestock  
[www.ilri.org](http://www.ilri.org)



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*‘Better lives through livestock’*  
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