

Nutrition in Context: Are millets a strategy for sustainable, healthy diets in The Gambia?



Photo: Kiang West, The Gambia, Richard Sidebottom

Dr Sarah Dalzell (PhD)

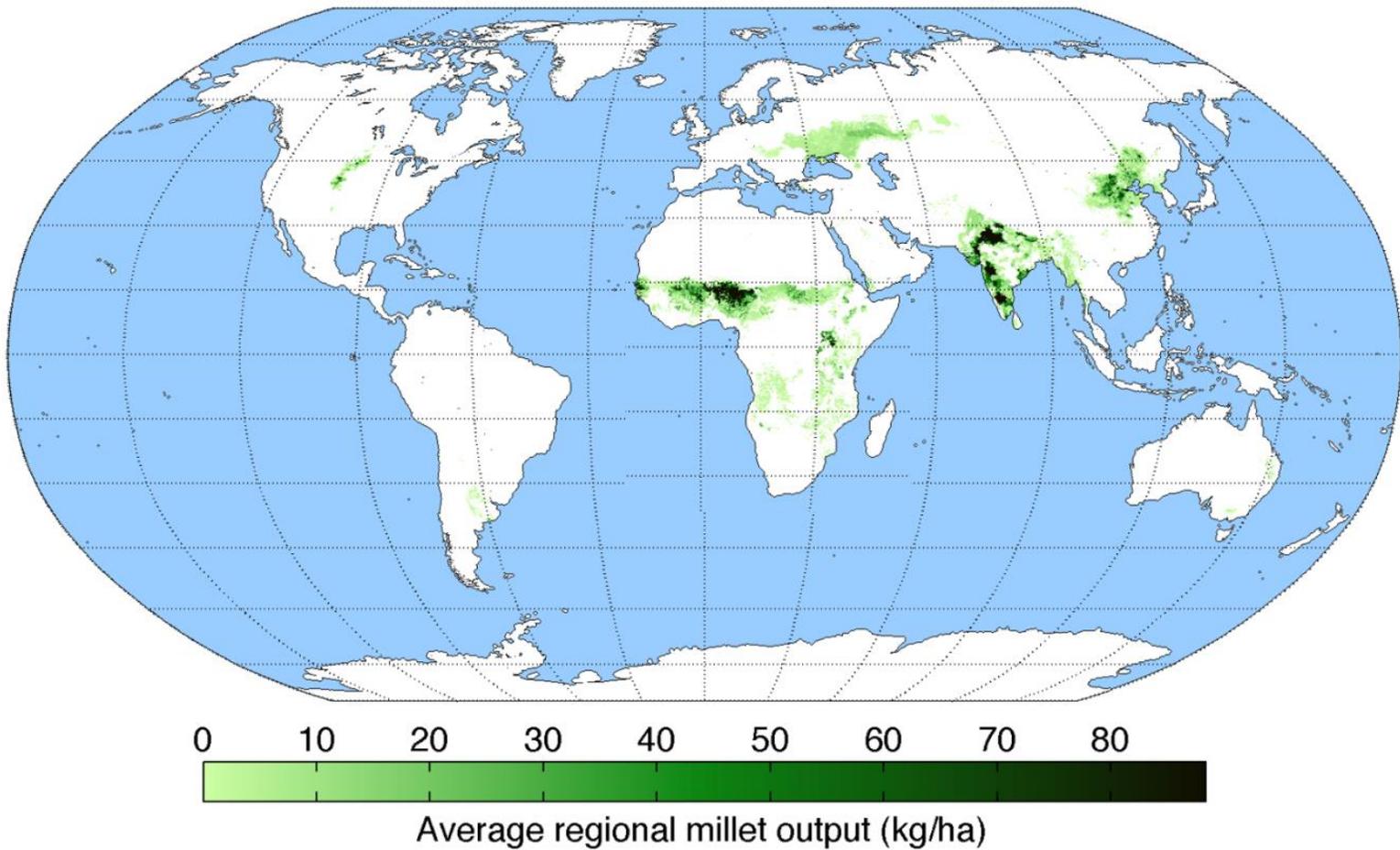
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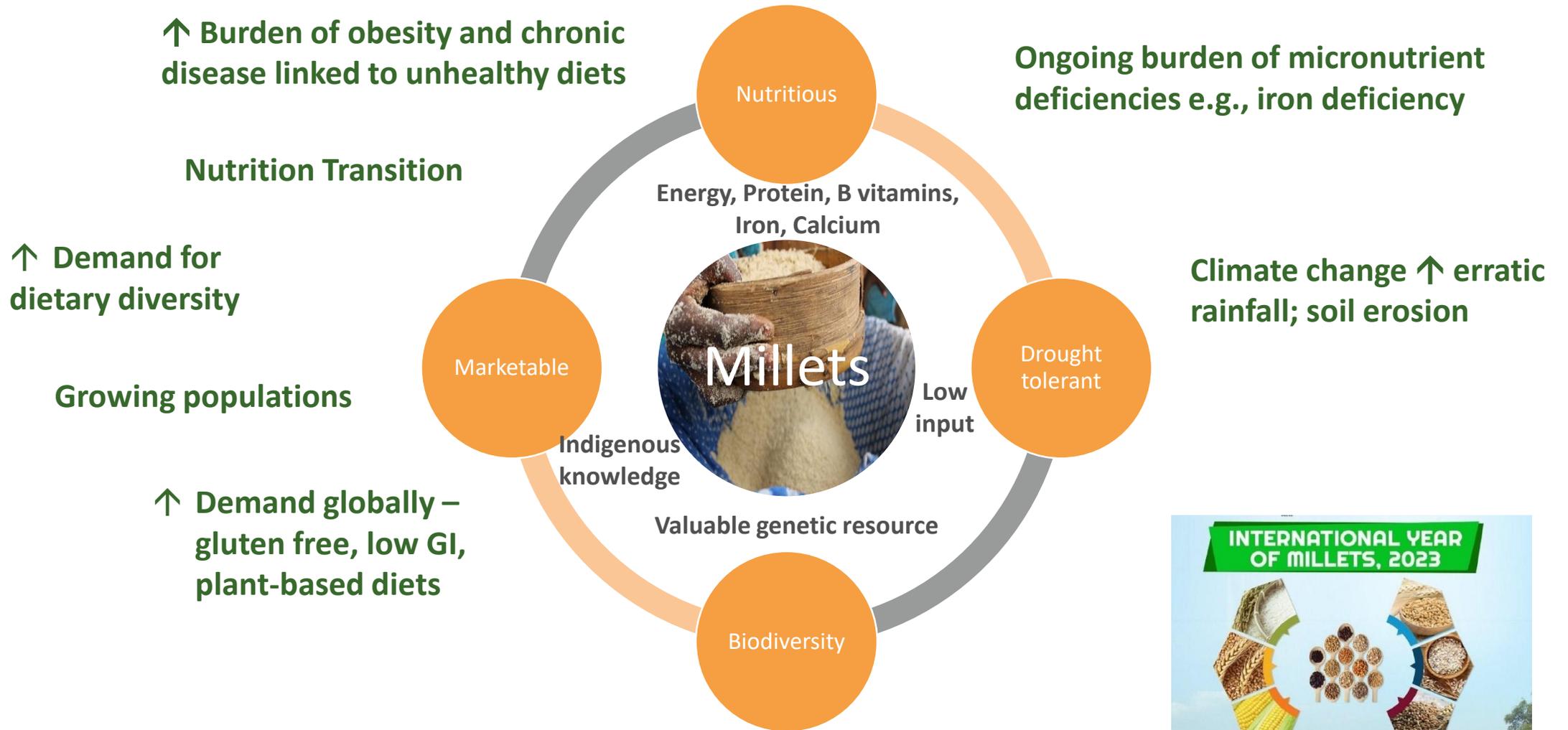
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Background to millets



Source: <https://decolonialatlas.wordpress.com/2016/10/09/agricultural-maps-of-the-world/>

Value of millet in an African context



Background to The Gambia



The Gambia

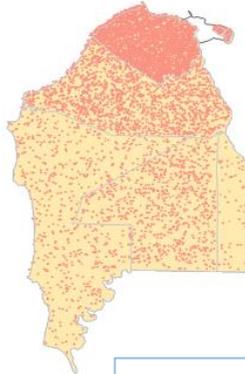


Photo: The Gambia, Keeley Ffrench

- 2 million people
- Highly mobile – across rural/urban
- Agriculture – small-scale subsistence, rain-fed crop production
- Experiences multiple forms of malnutrition



Urbanisation: The Gambia



Population dot map from District data
Gambia 2003
1 Dot = 100 Persons

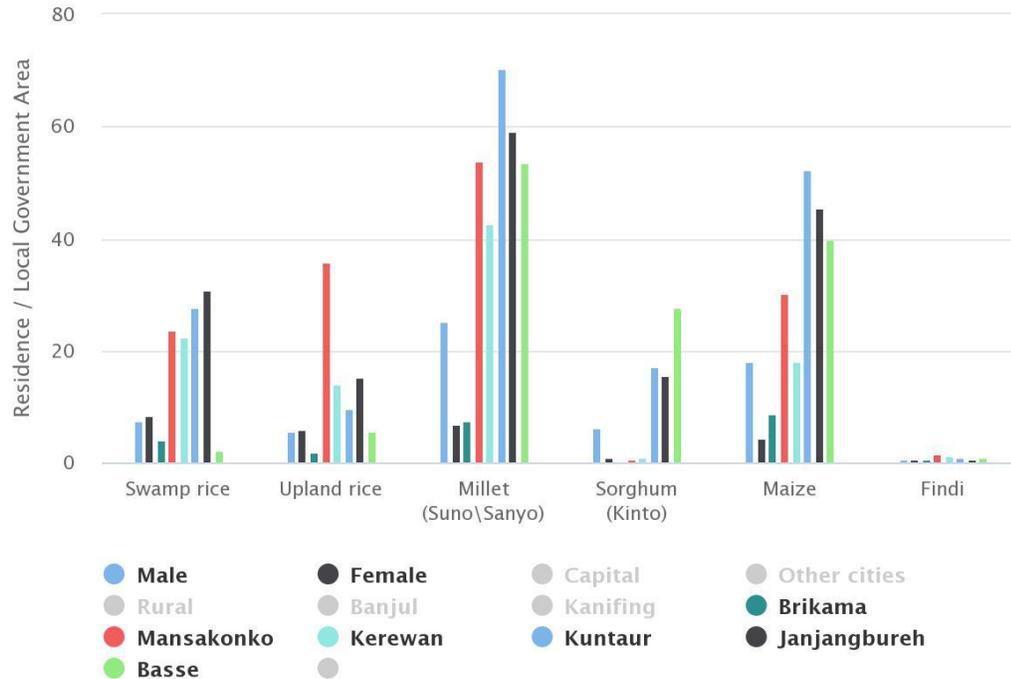
- 1950 the population ~270,000
- Population **doubled in last 20 years** to 1.9 million
- 38% growth in population in last 10 years
- 80% growth in Brikama in 10 years

Gambian Government, 2013



Cereals grown in The Gambia

Share of households who have grown the crop during the last 12 months by sex of household head, residence and LGA

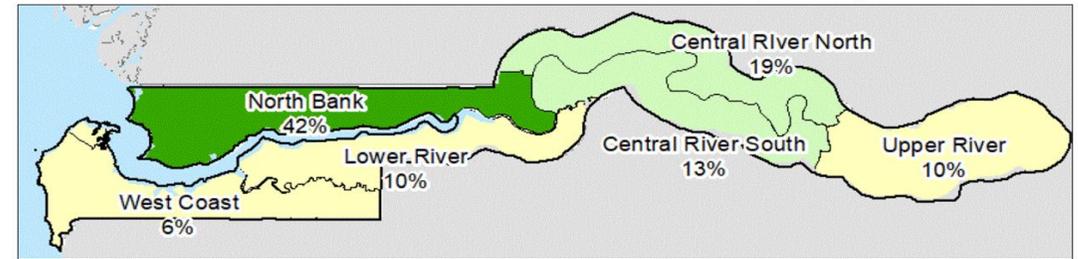


Findi = Fonio

Sanyo/Suno = Pearl millet

IHS 2015/16 (GBOS)

Gambia Millet Production (2011)



Percentage values indicate percent region production of total millet production.

Source: Production data from Ministry of Agriculture, Agricultural Census of The Gambia, 2011/2012.

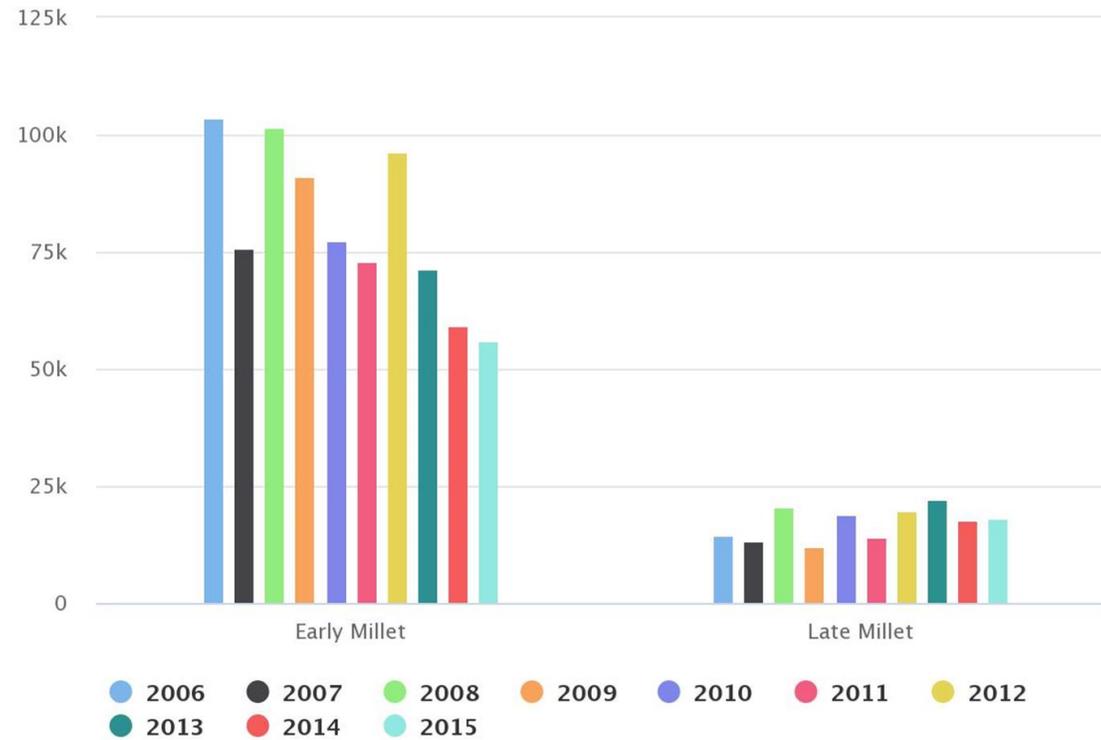


USDA Foreign Agricultural Service (FAS)
Office of Global Analysis (OGA)
International Production
Assessment Division (IPAD)



Trends in millet production in The Gambia

Summary of Production output (Metric Tonne) from 2006–2015 of Field Crops



IHS 2015/16 (GBOS)



Findings from rural & urban Gambia

Shifts in cereal consumption

Rice



Millet



Bread



MillNET_i

Millets and Nutritional Enhancement Traits for Iron bioavailability

A BBSRC-GCRF funded research programme, with partners in the UK, Ethiopia, The Gambia and India.

2 year project: April 2019 - March 2021

PI: Prof Howard Griffiths
Programme Manager:
Joanna Wolstenholme



UK partners



Gambian partner



Ethiopian partners



Indian partners



Biotechnology and Biological Sciences Research Council



Global Challenges Research Fund

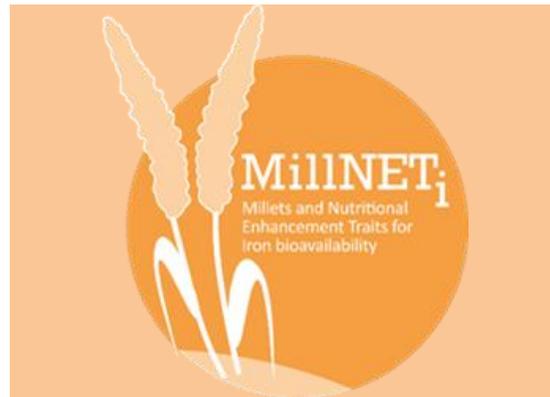
*Transforming India's Green Revolution by Research and Empowerment for Sustainable food Supplies

Research Approach



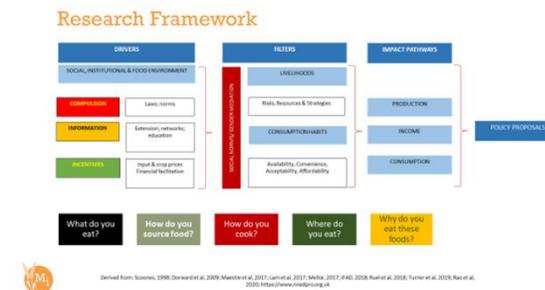
Challenge-led

Addressing the United Nations Sustainable Development Goals



MiINETi

Improve iron nutrition
Optimize the **iron**
 available to the body
 from **biofortified pearl millet**



Collaboration

Cross-disciplinary
 Crop science
Nutrition science
Social Science



Partnerships

With National Nutrition Agency (Ms Haddy Crookes)
 Working with local communities



Pearl millet in The Gambia



Production

- Primarily grown by men

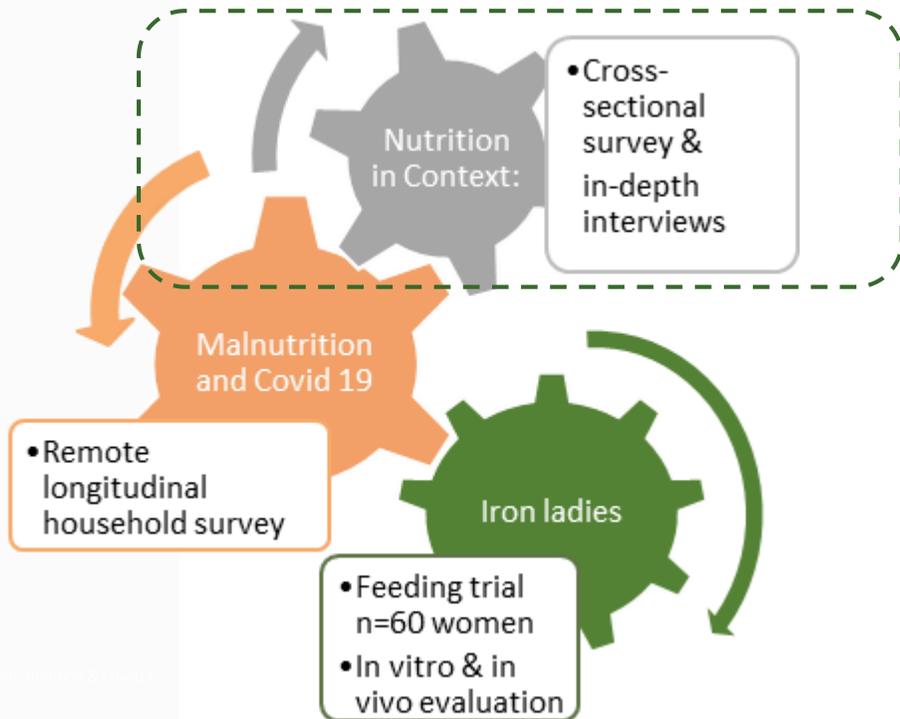
Processing

- Processed by women
- Time-consuming
- Labour intensive
- Wholegrain vs refined
- Fermentation practices

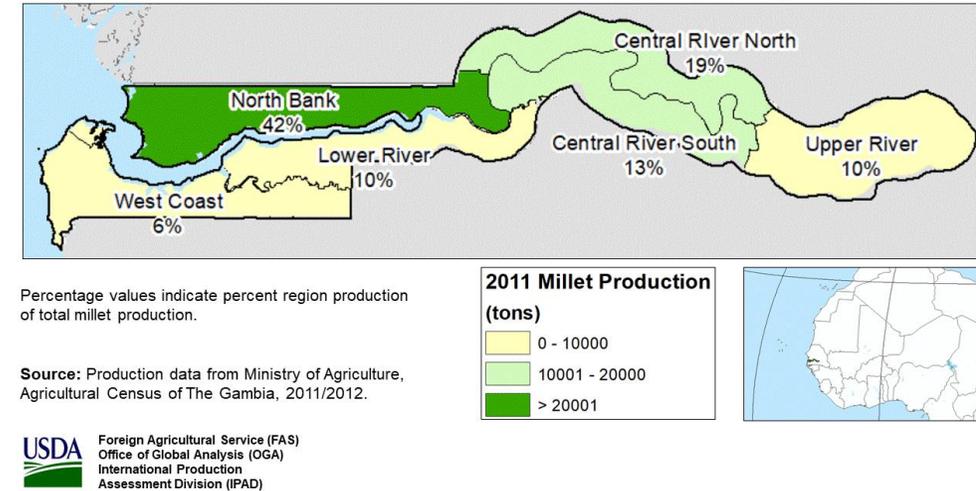


Research Design

Inter-related Gambian projects



Gambia Millet Production (2011)



Nutrition In Context

- What millet dishes do people consume?
- Who grows, prepares and eats millet?
- Availability of ready-to-eat dishes?
- Collecting recipes from households and vendors
- Where is it eaten? Rural/urban, schools etc..
- Why do people consume millet/or not?
 - Livelihoods, Migration, Culture etc...



Thanks to...

- Funders – UKRI and BBSRC
- Research team particularly Dr Richard Sidebottom and Dr Shailaja Fennell
- Gambian team - Dr Wuri Jallow, Ms Haddy Crookes-Lowe, Dr Carla Cerami
- Participants
- Many photos courtesy of Ms Keeley Ffrench



Biotechnology and
Biological Sciences
Research Council



Thank you for your listening!

“Today, not only are health problems global, but lessons, insights, and fresh solutions regarding such problems flow in all directions.”

Fineberg and Hunter 2013



Photo: Kiang West, The Gambia, Ian Farrell

