

Climate Change, Food Systems, and Nutrition: A One Health Rapid Review

A catalog of evidence from South Asia

Bhawani Bakshi

Independent Consultant & Researcher

Rationale

Looking at Food Systems through the ‘One health’ lens

- Concerted effort by global institutions to “**address risks at the human-animal-ecosystems interface**”
- Since 2010 , a tripartite collaboration between FAO, WOAHA, and UNEP has made to facilitate work on One Health
- More recently in 2022, a quadripartite was established with the inclusion of WHO



Food and Agriculture
Organization of the
United Nations



World Health
Organization



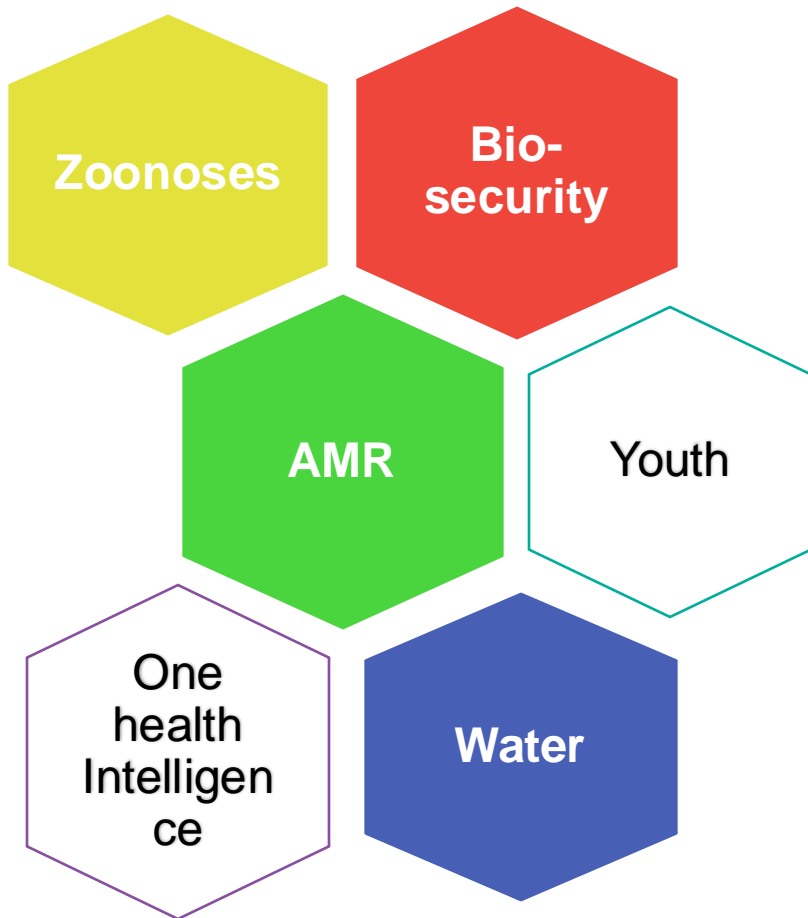
World Organisation
for Animal Health
Founded as OIE

**ONE HEALTH
JOINT PLAN OF ACTION**
(2022-2026)

**WORKING TOGETHER FOR
THE HEALTH OF HUMANS, ANIMALS,
PLANTS AND THE ENVIRONMENT**

Looking at Food Systems through the ‘One health’ lens

FAO’s areas of work in One Health



FAO’s Strategic Framework 2022-2031



Better Production

Innovation for sustainable agriculture production / Blue transformation / **One Health** / Small-scale producers’ equitable access to resources / Digital agriculture



Better Nutrition

Healthy diets for all / Nutrition for the most vulnerable/ Safe food for everyone/Reducing food loss and waste /Transparent markets and trade



Better Environment

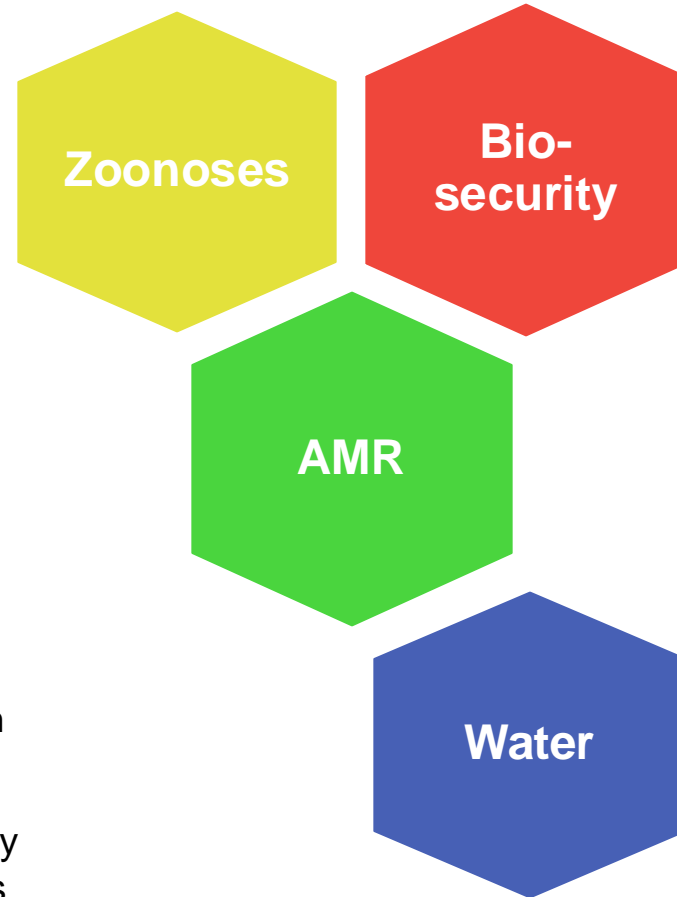
Climate change mitigating and adapted agrifood systems



Better life

Inclusive economic growth by reducing inequalities (urban/rural areas, rich/poor countries, men/women).

Looking at Food Systems through the 'One health' lens

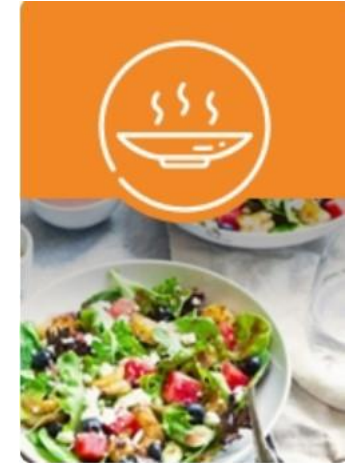


Climate Change impact on core nutrition outcomes is through food security & access only



?

Exact One-health pathways are missing from the synthesis



Better Nutrition

Healthy diets for all
/Nutrition for the most vulnerable/ Safe food for everyone/Reducing food loss and waste
 /Transparent markets and trade

- Quick review of **IPPC's 6th Assessment Report**
- Pest and diseases in food systems is included but evidence is missing for South Asia?
- Zoonotic diseases is included but how they may impact food and nutrition outcomes is missing
- AMR is missing, from climate change impact

Approach & Methodology

Systematic Maps for Evidence Synthesis

- Spotlight on **interdisciplinary and collaborative work**, which is the crux of the “One Health” approach
- Cataloging interdisciplinary research done so far, identifying gaps in existing literature
- **Identifying evidence-based linkages between FAO’s One Health and other priority areas**
- Teasing out pathways of impact between **Climate change and Food systems** & ultimately **Nutrition-related health outcomes**, focusing on South Asia

Research Question

What are the “One Health” pathways of Climate Change impact on human health & nutrition outcomes?

P

Agricultural/Food Systems in any/all of the 8 South Asian countries

E

- Climate change or variability
- Anthropogenic or non-anthropogenic

C

O

- FAO's One Health work areas
- Food production/food security/food safety/Malnutrition

Approach to systematic maps: Search strategy

Theme 1



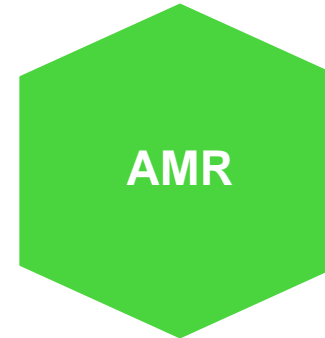
+

Theme 2



+

Theme 3



+

Theme 4



+

Food production OR Food safety OR Food security OR Malnutrition

Search Protocol & Limitations

- Efforts have been made to follow standard **Sytematic Map guidelines**
- **Stakeholder Consultations** have been prioritised including this conference presentation
- Maximize **relevance of the evidence synthesis**
- Databases used: **Google Scholar, PubMed, AGRICOLA, AGRIS, Lens.org**
- Types of evidence included: **Primary research studies, modelling studies, reviews, and expert commentaries**



Findings & Implications