Evidences from Ghana, Lesotho and Zimbabwe

Food Systems: Harnessing nutrition co-benefits of climate resilient agriculture

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Towards human and planetary health

We know that climate change and food and nutrition security are highly interlinked:

- Food production influences climate change and **vice versa**
- Climate change undermines current efforts to:
  - ✓Reduce hunger
  - ✓Reduce all forms of malnutrition
  - ✓Promote the shift towards *healthy diets*

What we eat affects climate and climate affects what we eat!

We need food systems transformations!

And… Do we have what it takes?

What can we build on and what needs to change?

What scenarios do we need to follow?

What did we do?

1

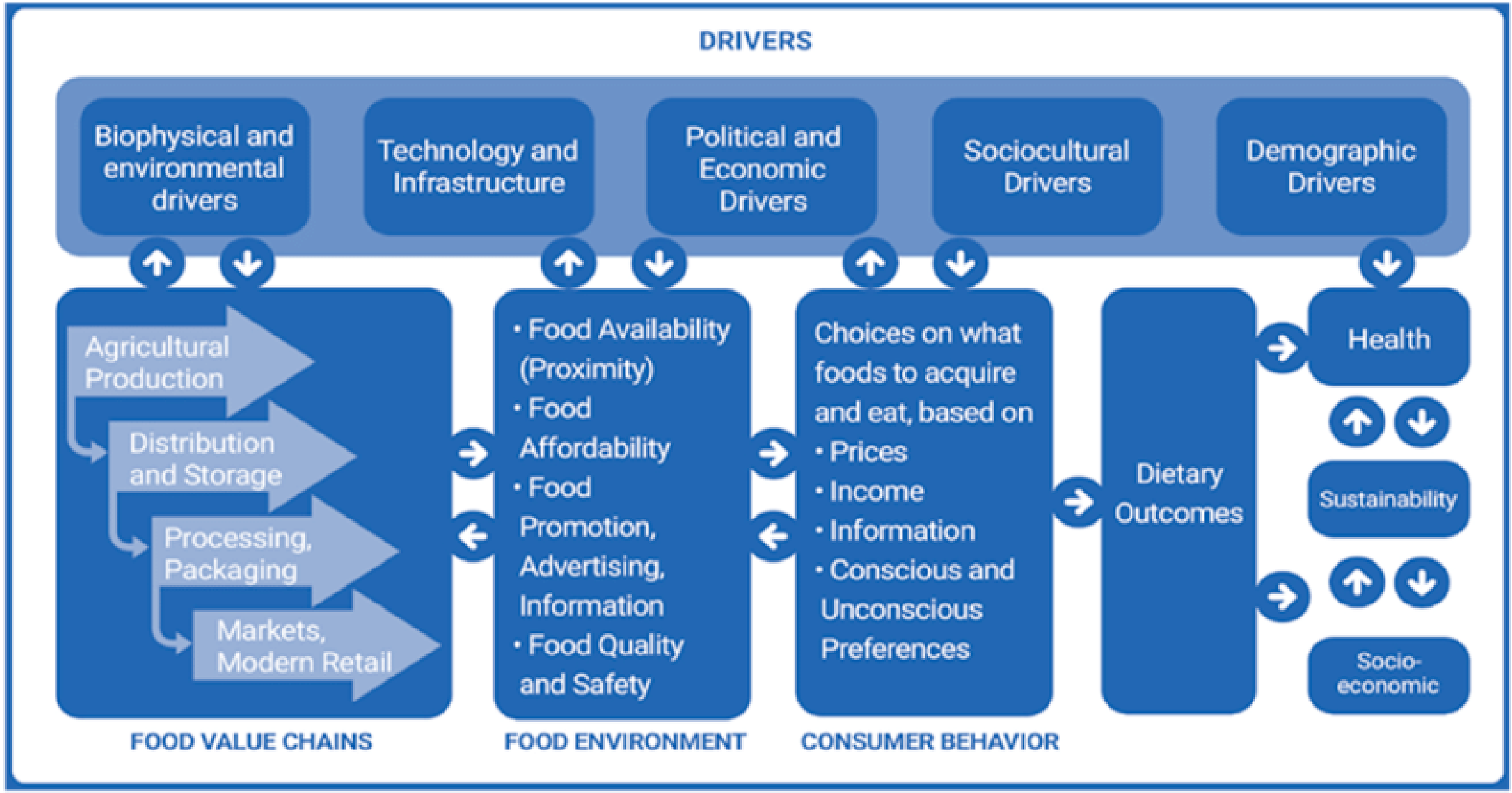
Explore the relationship between climate (change) and nutrition (security) in Ghana, Lesotho and Zimbabwe

2

Find examples of climate resilient agriculture *with nutrition co-benefits* (in the different food system domains) in Ghana, Lesotho and Zimbabwe

3

Find evidence in 'the literature' of climate mitigation and adaptation measures (focussed on climate resilient agriculture) with nutrition co-benefits



Conceptual Framework of Food Systems for Diets and Nutrition. de Brauw, A., et al. (2019)

Climate resilient agriculture *with nutrition co-benefits*

Evidence from the general literature review: Did you know that....

The years 2015–2019 were the five warmest on record; the **2010–2019** average temperature was the warmest on record.

"If one considers that 75% of food production depends on only 12 plants and 5 animal species (!), it becomes clear how vulnerable the world's food supply is!"

Obesity and undernutrition each affect approximately ***2 billion people worldwide***, and in 2017, over ***150 million children*** *were* ***stunted***.

Despite the enormous successes in increasing global food availability the global burden of all forms of malnutrition remains staggering.

Every year, approximately ***1.3 billion metric tons*** of food produced for human consumption – one third of the total – never reaches the consumer's plate or bowl, yet 3 billion people today have poor or inadequate diets.

More than 50% of all fruits and vegetables and 20–30% of meat produced globally are lost or wasted.

Climate resilient agriculture *with nutrition co-benefits*

Evidence from the general literature review on actual co-benefits in FS domains

- **Drivers**
- **Food Value Chains**
- **Food Environment**
- **Consumer Behaviour**

What does the literature tell us?
A few of the latests 'hits'

Especially in discussing and dealing with nutrition and climate change issues, understanding consumers and their behaviour within one conceptual framework (Food Systems Framework) is beneficial, even crucial.

The need for food systems transformations is broadly acknowledged

One of the key steps in navigating food systems and their transformation to more sustainability is the design of ‘integrated food policies’ and 'making knowledge work for policy'; ***However, policies are there to be implemented!***

Realising policies that are truly integrated requires engagement of diverse actors; that requires facilitation which asks in turn for reflexive MEL systems;

Strengthening of ***innovation*** capacities of all actors in the Agricultural Knowledge and Innovation Systems; participatory and action research is therefore pivotal!

An increased number of voices highlight that transitions and transformations are to be 'just' and *leave no one behind.*

Few interesting findings Ghana

- Few key climate aspects and climate change impacts
- *Environmental health*

- Few key nutrition aspects
- *Human health*

Photo credit: Hamish John Apple

Few interesting findings Ghana

- The main barriers to adopting climate smart farming? Knowledge, inadequate technical support, poor access to inputs and credits and unfavourable market structure.
- Institutional setting, cooperation and coordination affects impact

Evidence for opportunities:

- Gender approach
- Credit schemes
- Land access
- Role of Development Partners

Photo credit: Hamish John Apple

Few interesting findings Lesotho

- Lesotho is more vulnerable to the impacts of climate change because of geographical characteristics and prevailing socio-economic conditions.
- High variability in both inter-seasonal and intra-seasonal precipitation, recurrent draughts have yielded steep reduction in agricultural production.
- The food system in Lesotho does not provide affordable, physical and economically accessible and healthier diets.
- Consumer behavioral aspect play a major role.

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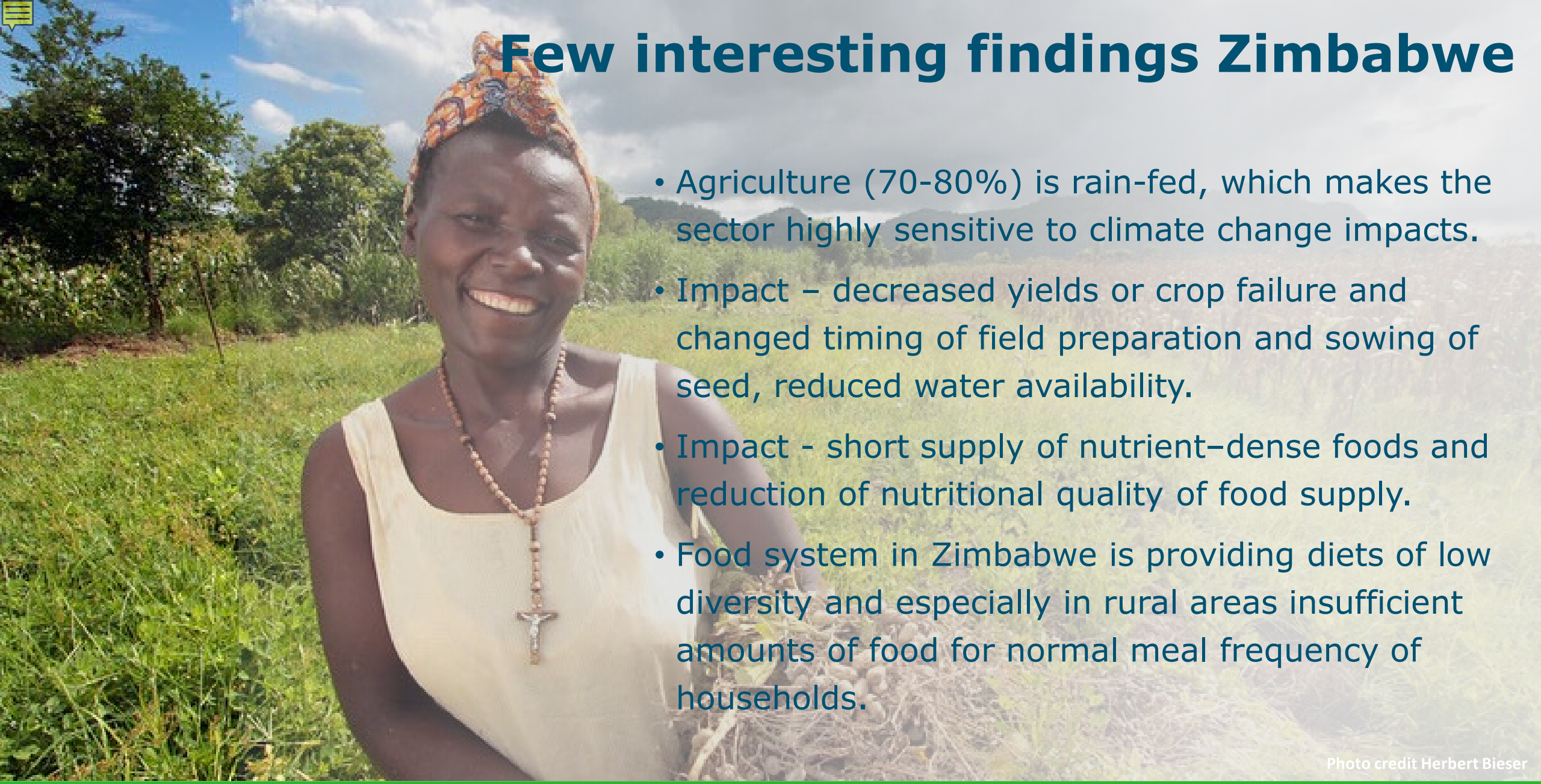
Few interesting findings Lesotho

- A combination of a cash transfer and improvement of homestead gardening proved to positively impact on agricultural production (climate smart agriculture).
- Positively impact on the food security and welfare of poor families.
- This examples was used for scaling-up in response to the El Niño drought in Lesotho (2017).
- Entry point social security focusing on beneficiaries eligible for the Child Grant Programme.

Photo credit Herbert Bieser

Few interesting findings Zimbabwe



- Agriculture (70-80%) is rain-fed, which makes the sector highly sensitive to climate change impacts.
- Impact – decreased yields or crop failure and changed timing of field preparation and sowing of seed, reduced water availability.
- Impact - short supply of nutrient–dense foods and reduction of nutritional quality of food supply.
- Food system in Zimbabwe is providing diets of low diversity and especially in rural areas insufficient amounts of food for normal meal frequency of households.

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Few interesting findings Zimbabwe

- Women are vulnerable to malnutrition, financially insecure and more vulnerable to climate related impacts due to underlying existing power relations, structure and gender inequalities.
- Incorporate Gender Action Learning System (GALS) to promote gender transformation.
- In value chain activities have active gender targeting to ensure women's participation.
- Contextualise value chain activities to (nutritional) needs to women and their households and to increase their adaptive capacity to adequately respond to climate changes.

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Food System Outcomes:

Can we have both

human *and* planetary health?

"It DEPENDS",
stated Jessica Fanzo already...

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