



**LEAVING NO  
ONE BEHIND:  
EVALUATION  
for 2030**

2019 National Evaluation  
Capacities Conference

**AN EVALUATION ON FOOD  
FORTIFICATION ON STUNTING**

**Caroline Makuvire**

**Zimbabwe**

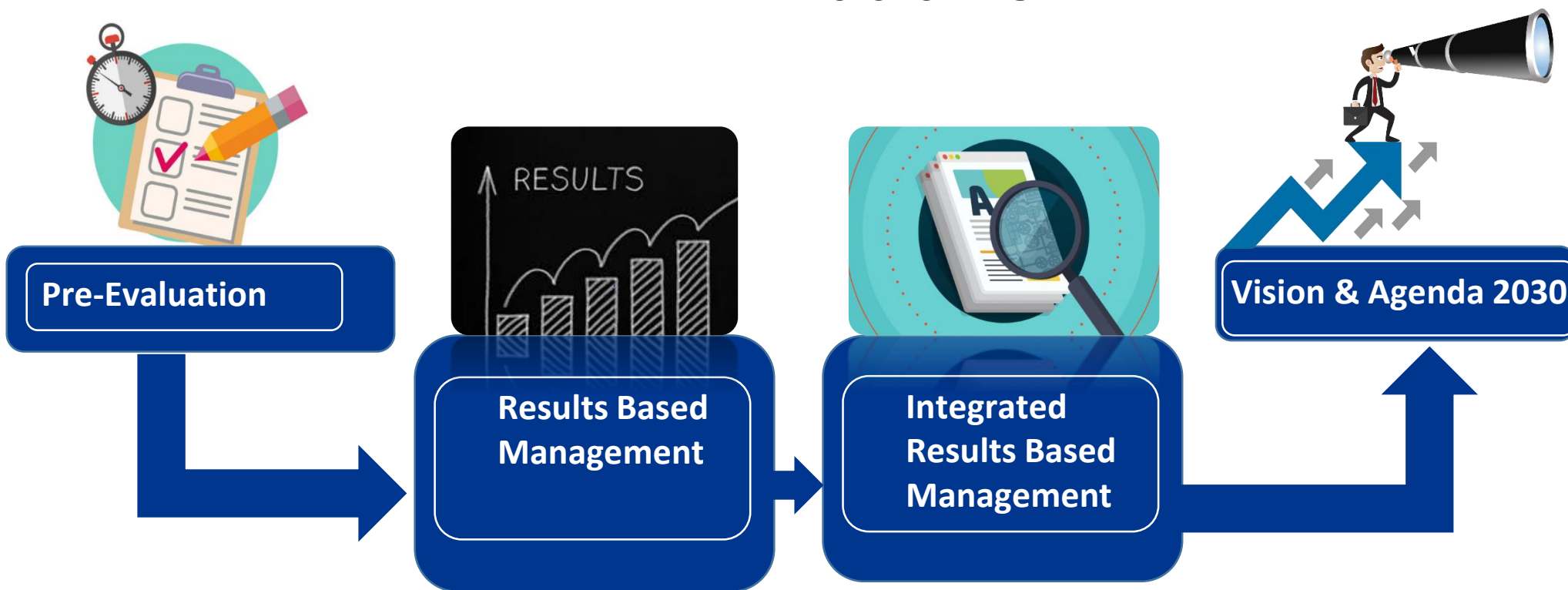
# Bio-Fortified Crop



# Outline of Presentation

- Evolution of Evaluation in Zimbabwe
- Case study on food fortification on stunting
- Background to case study
- Hypothesis
- Methodology
- Findings
- Summary of findings
- Recommendations

# Evolution of Evaluation in the Public Sector in Zimbabwe

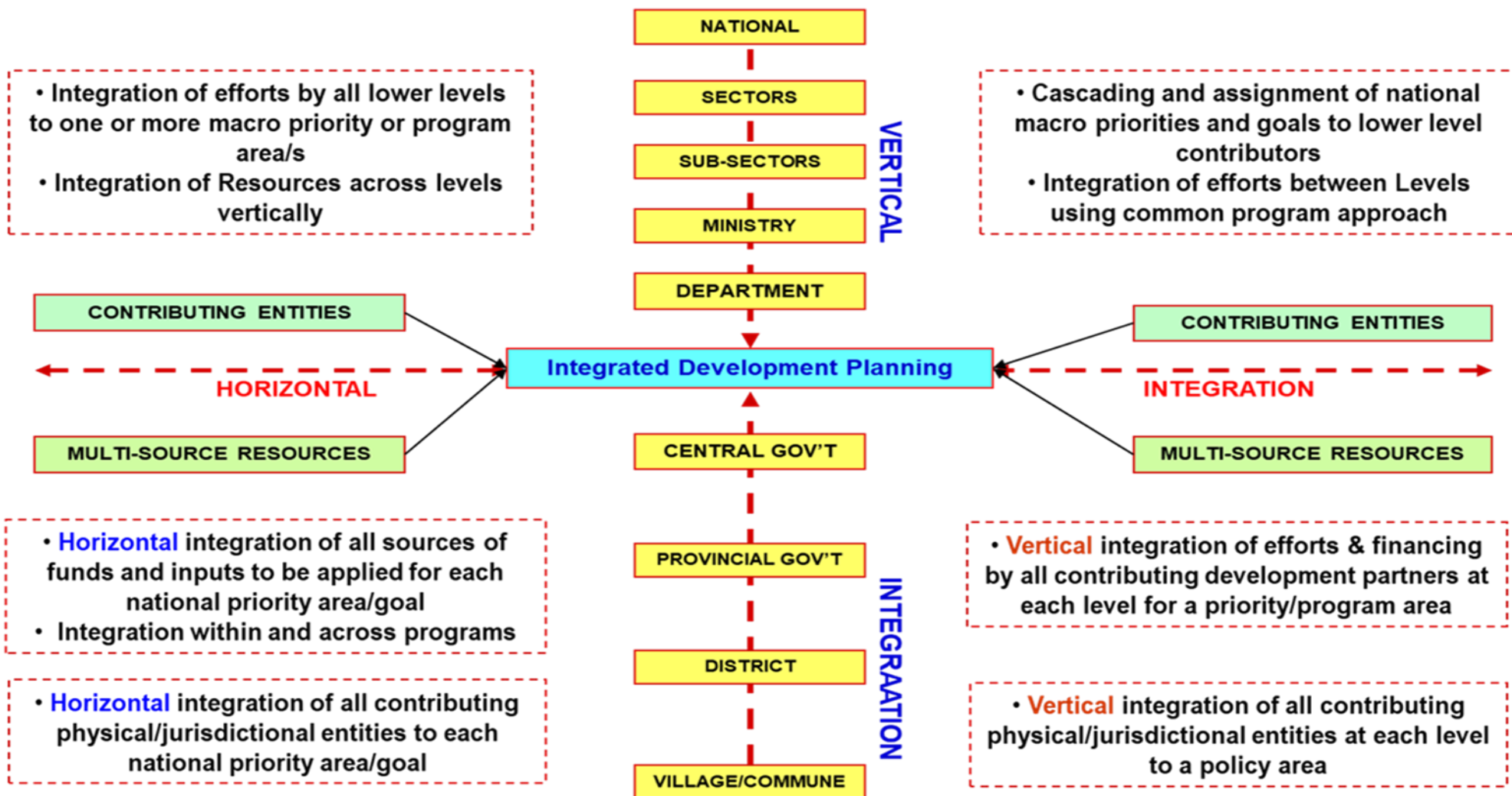




# Evolution of Evaluation cont'd

- During the Pre Evaluation there was no defined structures of evaluation.
- During 2005, more focus was on Monitoring, although M&E structures had been introduced.
- Evaluation then was silent as it was donor funded and Government did not have control of it as it came with “**pre set conditions**” attached thereto.
- In 2015 **IRBM** was introduced with the component of **IRBM&E**. Currently, the Government is using an approach called **Internalized Self Evaluation (ISE) through the HoVer Principle** that focuses on programs not activities which is inclusive. Government has ownership of the ISE method.
- In this regard, technical committees have been set to validate the approach and methodology.
- The above diagram is an example of country driven approach as it uses the **zero defect approach** and continuous improvement by focusing more on internal evaluation so is to achieve the country's Vision and Agenda 2030 .

# HoVer Principle



# Case Study on Food Fortification on Stunting

- The multitude of stunting (anthropometric indicator, height-for-age z-score, HAZ<2 standard deviations) below the WHO International Growth Reference in under 5 children poses an persistent threat to child development in Zimbabwe.
- Stunting in under 5 children reduced from 33% in 2010 to 26.% in 2018.
- This is still above the acceptable range by WHO standards. We are still in the medium range and more work has to be done.
- Low micronutrient density and poor protein quality in cereal based diets availed to under 5 children has been identified amongst the dominant causes of stunting in Zimbabwe.

# Background to Case Study

- In June 2017, the Zimbabwean Government made it mandatory for major local food manufacturers to fortify processed staple foods with micronutrients.
- In 2016, Zimbabwean Government promoted three bio fortified food crops, namely orange maize (Vitamin A), sugar beans (Zinc and Iron), and quality protein maize.



**Sugar**



**Cooking oil**



**Mealie meal**



**Wheat meal**



# Hypothesis

**H1:** Female headed households are more likely to adopt food fortification than their male counterparts.

**H2:** Household adoption of food fortification reduces the proportion of stunted children in that household.

**H3:** Female headed households that adopt fortification are more able to reduce the proportion of stunted children in their households than their male counterparts.



# Methodology



- The data comprised of a sample of 25,297 households with at least one under 5 child.
- Sample households were randomly drawn from the sampling frame of the 2012 National Census so that they were representative of the national population of households with under 5 children.

# Findings

| Type of Food Fortification | Proxy of Food Fortification Adoption   | Female [F] |         | Male [M] |         | Difference in means [F – M] |
|----------------------------|--|------------|---------|----------|---------|-----------------------------|
|                            |  | Mean       | SD      | Mean     | SD      |                             |
|                            | Observations # (%)   | 7,017      | (27.7%) | 18,280   | (72.3%) |                             |
|                            | Ever heard about Fortified foods [1 if Yes, 0 if No]   | 0.112      | 0.316   | 0.123    | 0.328   | -0.010**                    |
| Mandatory                  | Able to identify fortified foods on the market [1 if Yes, 0 if No]                                 | 0.105      | 0.306   | 0.118    | 0.322   | -0.013***                   |
|                            | Purchased any fortified food product in the past 30 days [1 if Yes, 0 if No]                       | 0.152      | 0.359   | 0.179    | 0.384   | -0.027***                   |
| Supplementation            | Fed child (6 – 23 months) meals with micronutrient powders in the past 30 days [1 if Yes, 0 if No] | 0.046      | 0.209   | 0.049    | 0.216   | -0.003                      |
|                            | Ever heard about Bio fortified Crops [1 if Yes, 0 if No]   | 0.045      | 0.207   | 0.056    | 0.229   | -0.011***                   |

# Findings cont'd

|   |         | Household head gender: |            |           | Difference |
|---|---------|------------------------|------------|-----------|------------|
|   |         | Total                  | Female (F) | Male (M)  | (F-M)      |
| Household<br>adopted food<br>fortification: | Yes (Y) | 0.253                  | 0.242      | 0.252     | -0.015     |
|   | No (N)  | 0.294                  | 0.302      | 0.290     | 0.012*     |
| Difference in<br>means                      | (Y-N)   | -0.040***              | -0.060***  | -0.033*** | -0.027     |



# Findings cont'd

| Type of Fortification     | Proxy of Food Fortification Adoption   |                           |
|---------------------------|--|---------------------------|
| Industrial Fortification: | Ever heard about Fortified foods [1 if Yes, 0 if No]   | -0.0469 ***<br>(0.011324) |
|                           | Able to identify fortified foods on the market [1 if Yes, 0 if No]                                 | -0.0208**<br>(0.009955)   |
|                           | Purchased any fortified food product in the past 30 days [1 if Yes, 0 if No]                       | -0.0333***<br>(0.011683)  |
|                           | Fed child (6 – 23 months) meals with micronutrient powders in the past 30 days [1 if Yes, 0 if No] | -0.0273*<br>(0.018255)    |
| Biofortification:         | Ever heard about Bio fortified Crops [1 if Yes, 0 if No]   | -0.0356**<br>(0.017038)   |

# Summary of Findings

- Firstly, we found statistically weak evidence that female headed households were more likely to adopt food fortification than their male counterparts.
- Secondly, food fortification reduced the proportion of stunted children in the household.
- Finally, in comparison to non-adopters, female headed households that adopt food fortification were more able to reduce the proportion of stunted children in their households than their male counterparts.



# Summary of Findings

- Women, children and people living with disability and the poor are often relegated to the after thought in all development activities.
- This expose' shows that if we include the marginalized thus: children are taken care of by the women, the same women then take care of people living with disability.
- This only shows that we leave no one behind.
- Zimbabwe launched the Zimbabwe National Food Fortification Strategy 2014—2018. The strategy, will serve as a guide at both policy and implementation levels to prevent micronutrient deficiencies.
- The Strategy was developed to address the micronutrient deficiency burden in the country as revealed by the 2012 Zimbabwe Micronutrient Survey.

# Recommendations

- These results highlight the need for policy makers to actively promote food fortification, as it is likely to contribute to the reduction of stunting and develop Pro-poor Strategies.
- To involve men in fortification interventions to improve on their knowledge and appreciation of fortified foods and the associated benefits.
- There is need to raise awareness on the production and consumption of Bio fortified crops (orange maize, quality protein maize and sugar beans) and stimulate consumption.





**LEAVING NO  
ONE BEHIND:  
EVALUATION  
for 2030**

2019 National Evaluation  
Capacities Conference

**Thank You**