# Climate resilience and agrobiodiversity management
# -
# concepts and tools for FFS

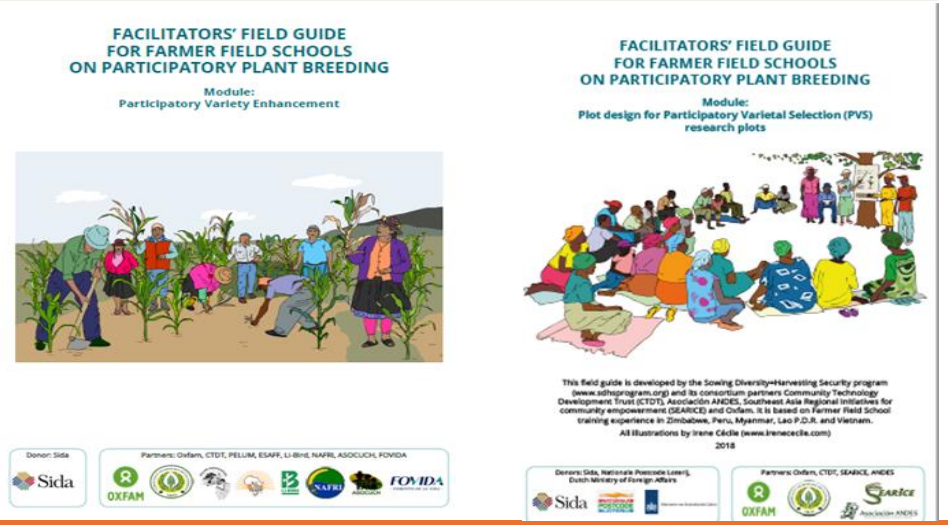
Hilton Mbozi – Oxfam Novib

**Global FFS Platform**
**Webinar series on Climate Change and Farmer Field School**
**Session 2:** Equipping farmers for climate action: key concepts and tools for FFS
Date |20th February 2025| Time: 3:00pm – 4:30pm

# Training modules for field work to increase farmers' resilience

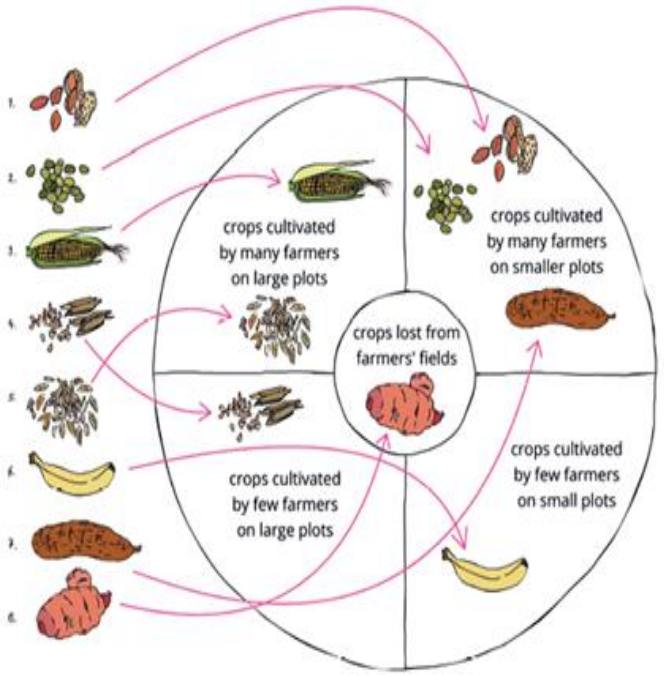
## Illustrated Field Guides: FFS on Participatory Plant Breeding (for local adaptation)

- Diagnostics Guide
- Participatory Variety Selection Guide
- Participatory Variety Enhancement Guide
- Participatory Variety Development Guide




## Tools for diagnostics:

- Diversity Wheels: # of farmers & land size
- Timeline analysis




**TIMELINE ANALYSIS – understanding changes that affected the farming system, in particular crop diversity, research and development**

| Context/Trends/Issues | Current Situation | Past Situation | Impact on production systems | Impact on crop diversity |
|---|---|---|---|---|
| Market access | Breweries buy white sorghum | Brewery was importing barley | Contract farming projects. Sorghum becomes more important | Increase in types of varieties and loss of non-white varieties |
| Infrastructure | Irrigated | Rain fed | Several cropping seasons per year | Short duration varieties replaced |
| Changes in farming methods | | | | |
| Soil fertility | | | | |
| Govt policies & programs | | | | |

# Agroecological Systems Analysis (AESA)

**Tool for data collection:**

AESA  is a powerful tool to:

- allow farmers to better understand the local agro-ecosystem
- help farmers make informed decisions
- evaluate crop varieties (characterization and performance)

## TABLE 2: AGRO-ECOSYSTEM ANALYSIS (AESA) SHEET AT VEGETATIVE STAGE [PRINT ON A3 PAPER]

**OBSERVATIONS AT PLOT LEVEL**

| | | | | | | |
|---|---|---|---|---|---|---|
| AESA FORM No. (e.g. 1, 2, ...) | | WEATHER CONDITION IN THE PAST WEEK (1: Mostly Sunny, 2: Mostly Cloudy, 3: Regular Rain, 4: Occasional Rain, 5: Windy, 6: Other) | Week 1 Date: | Week 2 Date: | Week 3 Date: | Week 4 Date: |
| FFS LOCATION | | SOIL CONDITION (Dry, Moist, Other) | | | | |
| SUBGROUP Name or No. | | % OF PLANTS EMERGED | | | | |
| CROP | | STAND ESTABLISHMENT (Uniform, Uneven, Poor) | | | | |
| NAME OF VARIETY OR BREEDING LINE | | CROP CONDITION (Good, Fair, Poor) | | | | |
| DATE OF PLANTING | | COMMENTS on crop condition (If not good) | | | | |
| No. OF SEEDS SOWN | | WEED TYPE and INTENSITY (Annual or Perennial) (Grasses, Sedges, or Broadleaves) (1: Low intensity, 2: Medium, 3: High) | | | | |
| PLANTING DISTANCE (cm x cm) | | | | | | |
| PLOT HISTORY (Previous crop & Management) | | | | | | |
| SOIL TYPE (Clay, Sandy, Loam, Clay-loam, Sandy-loam, Silt, Other) | | | | | | |

**CHOSEN BREEDING OBJECTIVES**

1.
2.
3.
4.
5.

**OBSERVATIONS AT PLANT LEVEL**

| SOYA BEANS / BEANS | | Leaf Colour | Plant Height(cm) | No. of viable branches (Before Flowering) | Early Plant Vigour (Good, Fair, Poor) | Pest and/or Disease Name & Intensity (1: Low, 2: Medium, 3: High) | Beneficiary insects Name & Intensity (1: Low, 2: Medium, 3: High) | Breeding objective (relevant at vegetative stage) | Breeding objective (relevant at vegetative stage) |
|---|---|---|---|---|---|---|---|---|---|
| Sample Plant Nr. 1 (randomly chosen each week) | Week 1 | | | | | | | | |
| | Week 2 | | | | | | | | |
| | Week 3 | | | | | | | | |
| | Week 4 | | | | | | | | |
| Sample Plant Nr. 2 | Week 1 | | | | | | | | |
| | Week 2 | | | | | | | | |
| | Week 3 | | | | | | | | |
| | Week 4 | | | | | | | | |
| Sample Plant Nr. 3 | Week 1 | | | | | | | | |
| | Week 2 | | | | | | | | |
| | Week 3 | | | | | | | | |
| | Week 4 | | | | | | | | |
| Sample Plant Nr. 4 | Week 1 | | | | | | | | |
| | Week 2 | | | | | | | | |
| | Week 3 | | | | | | | | |
| | Week 4 | | | | | | | | |
| Sample Plant Nr. 5 | Week 1 | | | | | | | | |
| | Week 2 | | | | | | | | |
| | Week 3 | | | | | | | | |
| | Week 4 | | | | | | | | |
| AVERAGE in Week 4 | | | cm | | | | | | |

| | | | |
|---|---|---|---|
| Unusual or extreme weather events (Indicate date) | | Key decisions on crop management, including pest & disease management, composting, irrigation, etc. (Indicate date) | |

# Training modules on Local Food Plants

> identify bottlenecks that prevent

local food plant consumption

and set FFS objectives to tackle these

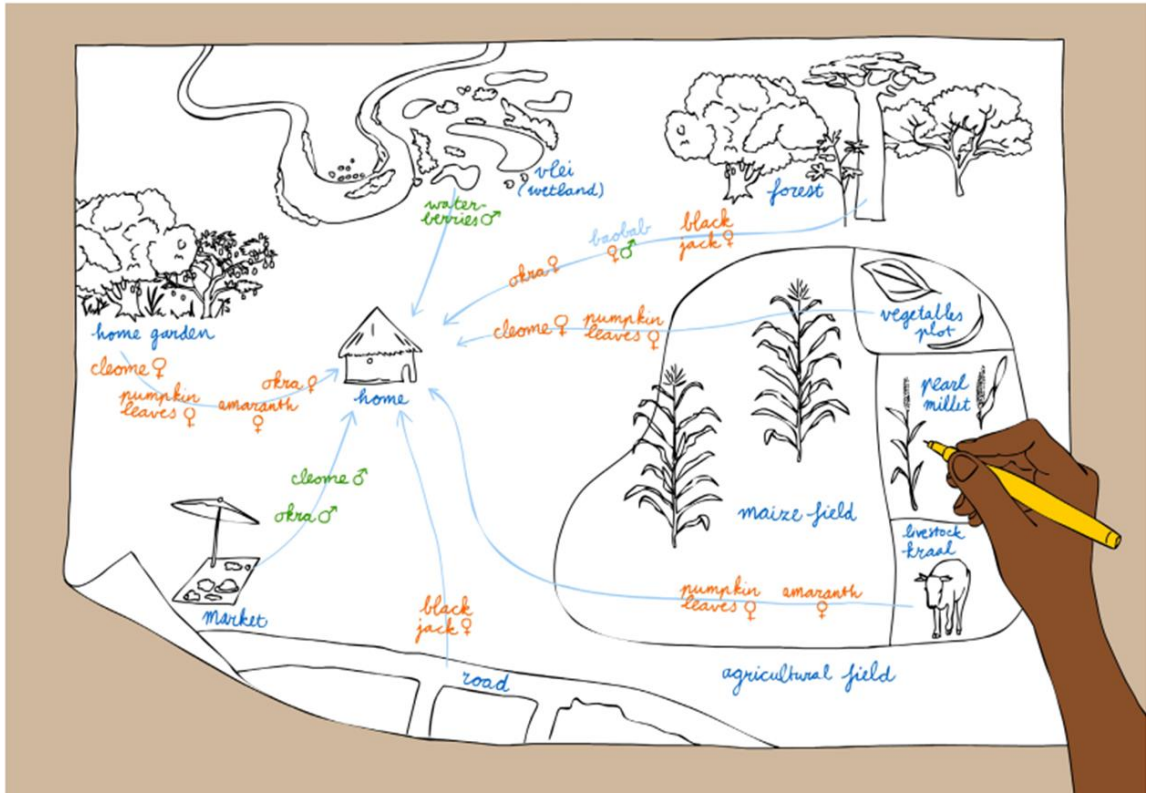
## Illustrated Field Guides: Local Food Plants and Nutrition

1. Diagnostic phase
2. Managing local food plants
3. Improving Nutrition
4. Special topics
5. FFS end-of-cycle evaluation

- All available in English and Spanish

## Tools for diagnostics:

- malnutrition problem tree
- resource flow map and other tools



HMbozi@oxfam.org.uk

**Field Guides are available on our website:**
**https://sdhsprogram.org/**