

***Approaches to
connecting the dots
around food systems
and nutrition:
Evidence to policy
and action***

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Current status

0 to 6 months

- Initiation of breastfeeding: Only 41% of children born in the last 5 years were breastfed within 1 hour of birth and 64% of children under 6 months are exclusively breastfed.

6 to 23 months Children

- Introduction to complementary food (6-8 months receiving solid or semi-solid food and breastmilk)–45.9%
- Minimum Adequate Diet –11%

School Children

- Under 6 years -Received Supplementary foods from ICDS – 62%
- MDM
- Present menu based on Protein and Calories only

Women

- Pregnant mothers -THR from AWC–66.4%
- Lactating mothers – 63.5%
- Received Nutrition education of AWC- 58%
- Present menu based on Protein and Calories only

INDICATORS	INDIA (%)
Stunting among children under 5 years	35.5
Wasting among children under 5 years	19.3
Underweight	32.1
Anaemia among children (6-59 months)	67.1
Women (15-49 years) BMI is below normal	18.7
Anaemia among women (15-49 years)	57.0

Food-based approaches, include diversifying food production and healthier diets are sustainable strategies for improving the nutritional status, particularly micronutrient status of populations.

Food systems are the **networks needed to produce and transform food, and ensure it reaches consumers.**



Nutri-sensitive agriculture- FAO's key recommendations for improving nutrition through agriculture and food systems

Agricultural program and investments can strengthen impact on nutrition if they:

1. Incorporate explicit nutrition objectives and indicators into their design
2. Assess the context at the local level, to design appropriate activities to address the types and causes of malnutrition
3. Target the vulnerable and improve equity
4. Collaborate and coordinate with other sectors
5. Maintain or improve the natural resource base
6. Empower women
7. Facilitate production diversification, and increase production of nutrient-dense crops and small-scale livestock
8. Improve processing, storage and preservation
9. Expand markets and market access for vulnerable groups, particularly for marketing nutritious foods
10. Incorporate nutrition promotion and education

Food and agriculture policies can have a better impact on nutrition if they:

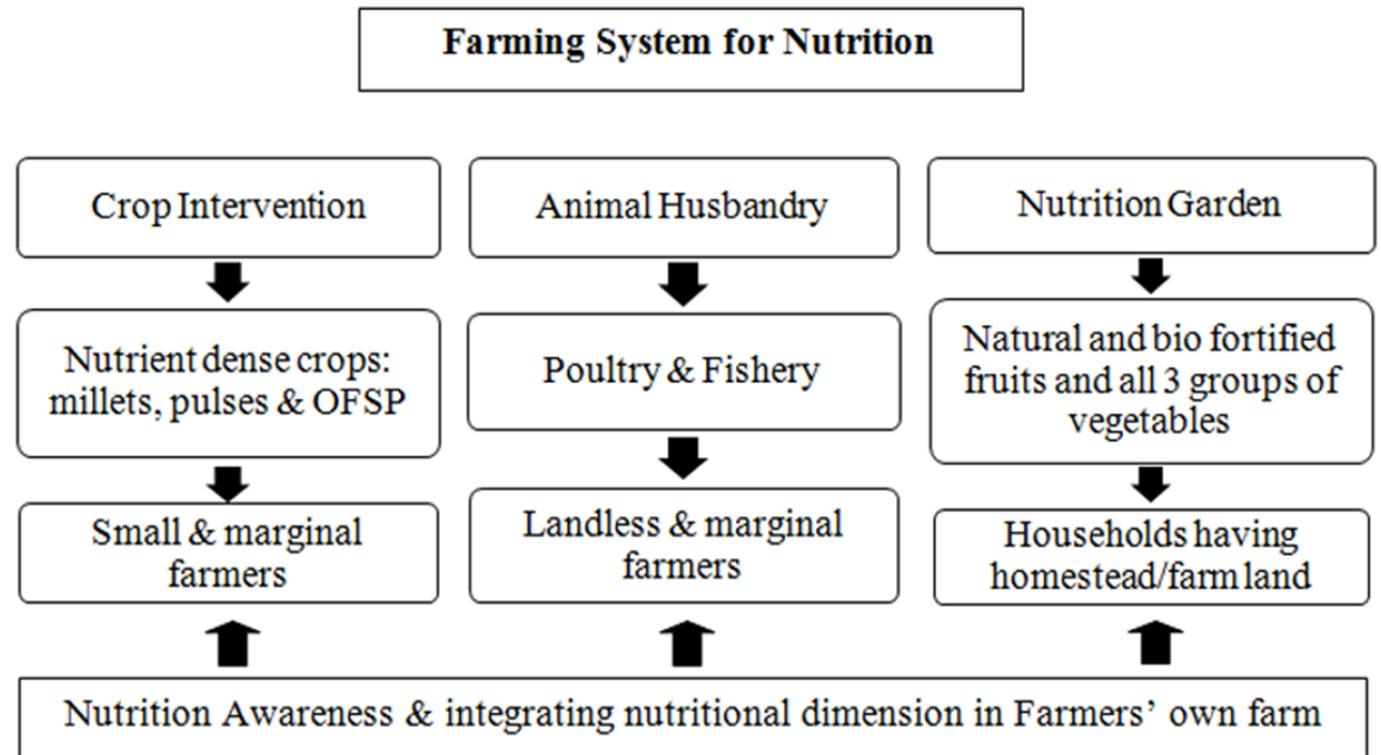
1. Increase incentives (and decrease disincentives) for availability, access, and consumption of diverse, nutritious and safe foods through environmentally sustainable production, trade, and distribution.
2. Monitor dietary consumption and access to safe, diverse, and nutritious foods.
3. Include measures that protect and empower the poor and women.
4. Develop capacity
5. Support multi-sectoral strategies to improve nutrition

Farming Systems for Nutrition

FSN intervention integrates crop, livestock, and allied agricultural practices and nutrition literacy as a package providing a holistic approach.

“The introduction of agricultural remedies to the nutritional maladies prevailing in an area through mainstreaming nutritional criteria in the selection of the components of a farming system involving crops, farm animals and wherever feasible, fish”.

Prof.M. S. Swaminathan

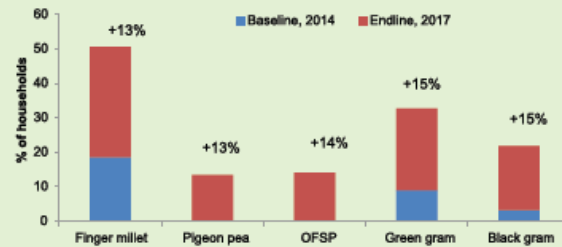


Impact of FSN on mean household dietary diversity (out of 7 food groups)

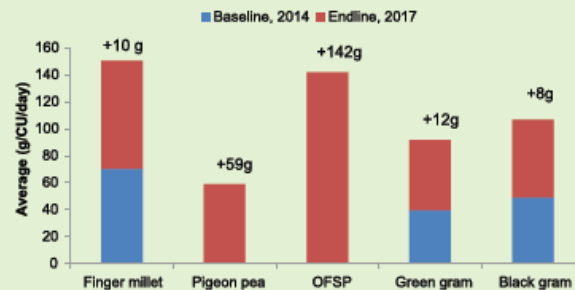
HDD	Koraput		Wardha	
	Baseline 2014 (n:150)	Endline 2017 (n:150)	Baseline 2014 (n:160)	Endline 2017 (n:150)
Average HDD	4.95±0.7	5.46**±0.7	6.24±0.8	6.27±0.7

Koraput (156 sample households)

Cultivation of nutrient-rich crops increased



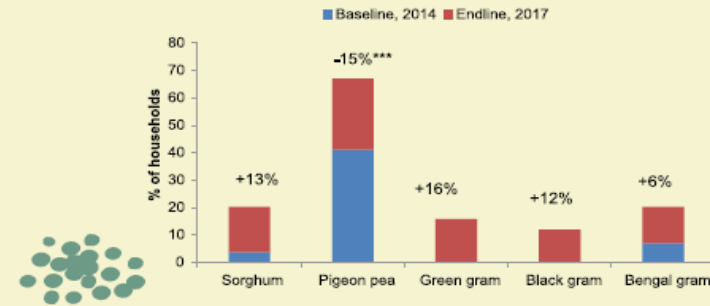
Consumption of crops promoted increased



OFSP: Orange Flesh Sweet Potato

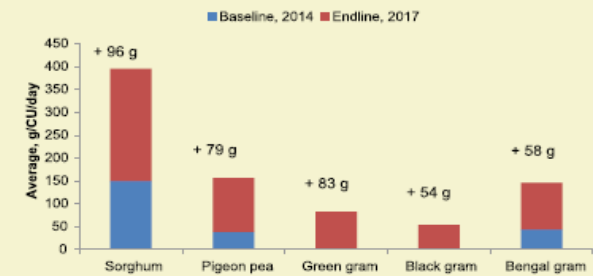
Wardha (158 sample households)

Cultivation of nutrient-rich crops increased



***The introduction of green gram and black gram led to decrease in percentage of households cultivating pigeon pea but overall pulse diversity increased.

Consumption of crops promoted increased



Note: CU-Consumption Unit: One consumption unit is defined as the calorie consumption of an average adult man weighing 60kg, doing sedentary type of work.

Nutrition garden



@ AWCs and School campus



@ household



@ Community



**Urban
community
Nutrition Garden
– established on
roadsides/under
bridges**

Impact of nutrition garden on household consumption pattern (g/person/day)

LANSA 2013-2018

Food group	Baseline (2014)		Endline (2017)	
	N	Mean±SD	N	Mean±SD
Wardha				
Fruits	31	15.72±24.38	138	91.20**±56.79
Leafy vegetables	32	40.87±21.96	138	59.44±21.73
Other vegetables	32	87.25±54.17	138	190.77*±61.96
Roots and Tubers	32	34.66±12.52	138	55.60**±22.11
Koraput				
Fruits	119	52.28±40.73	90	138.98**±145.75
Leafy vegetables	120	58.16±38.05	90	117.16**±142.50
Other vegetables	120	116.32±89.49	90	265.92**±245.53
Roots and Tubers	120	94.34±53.61	90	104.76**±69.59

Comprehensive Project on Rice Fallow Management (Odisha)

- Increase production of pulses crop to
 - Achieve self-sufficiency
 - Ensure food and nutritional security by providing pulse protein in the diet
 - Restoration of soil health through nitrogen fixation
 - Socio-economic development of farming community.
- Increase pulses consumption through production of quality grain to reduce malnutrition among farming communities.



Samposhan

Improving Household
Level Dietary Diversity
and Nutritional Security
of tribes through
Nutrition Sensitive
Interventions in Koraput,
Odisha



Nutri-Sensitive Agriculture with
Farmers



Nutri-garden at household level,
Anganwadi Centers, Tribal
Residential schools and at
community level

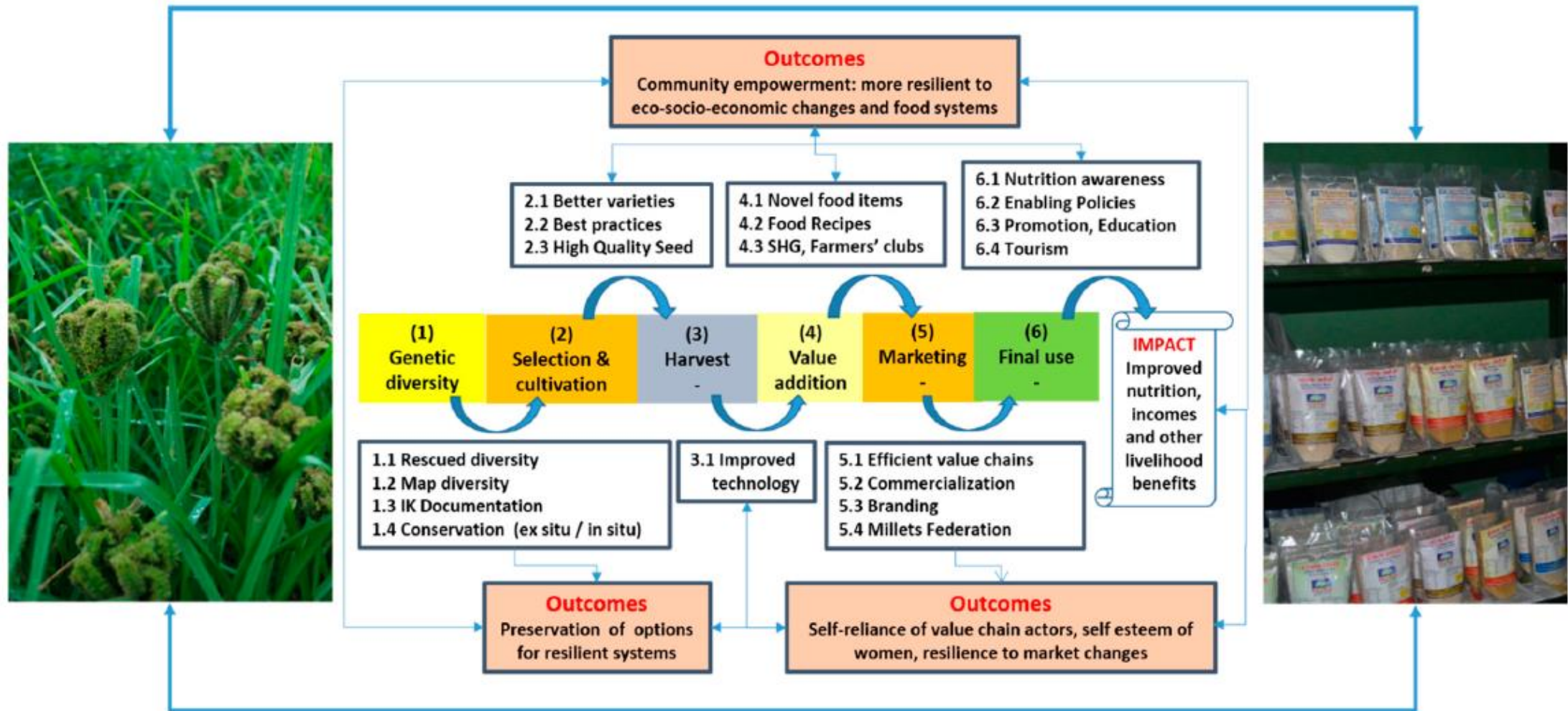


Campaigns on Nutrition
Literacy and behaviour change
with Adolescent Girls and
Women



Mushroom Cultivation by Women Self-Help
Groups

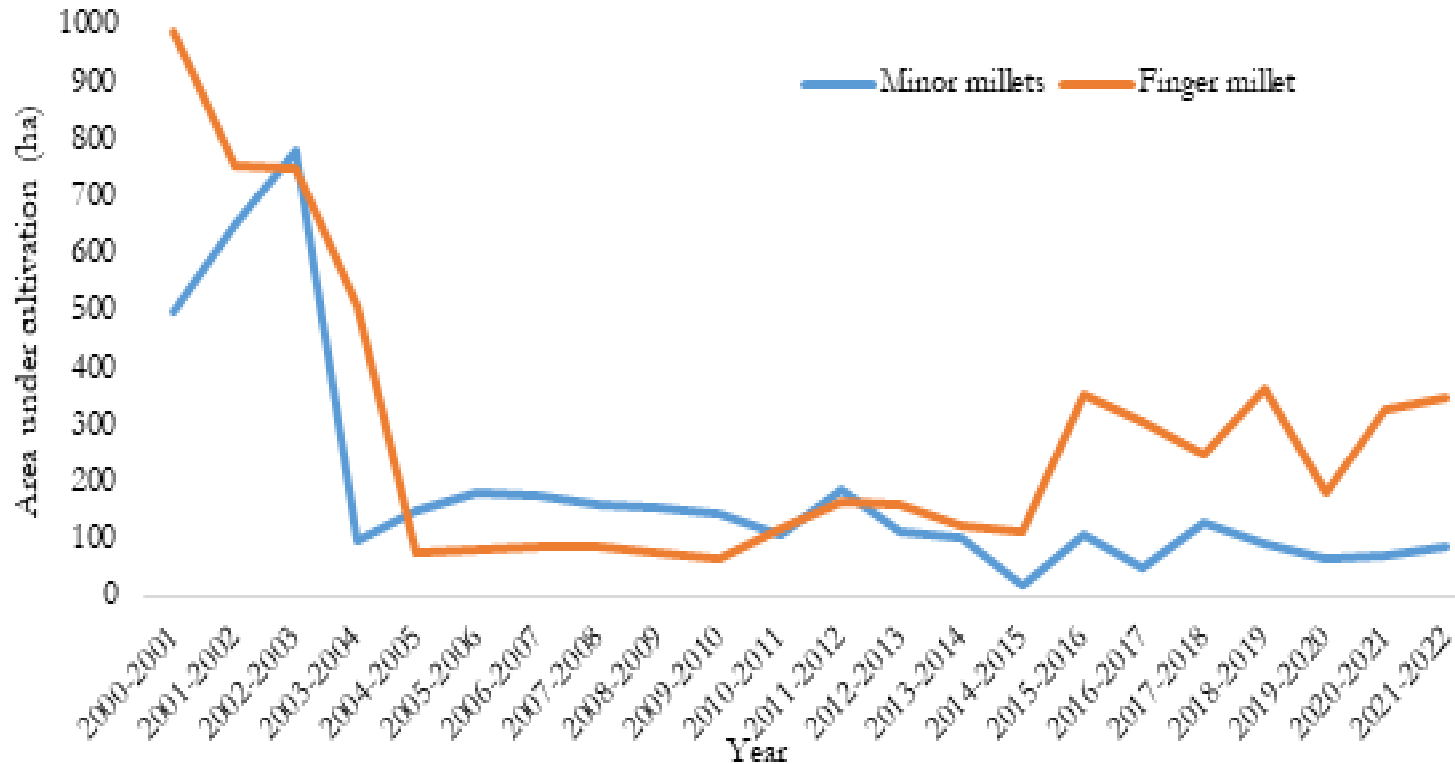
Integrated Approach on Small Millets



4 C Approach

Conservation , Cultivation, Consumption and Commercialization

Intervention in Kolli hills, Tamil Nadu – 4 C approach



Conservation of millet landraces – community seed banks

Increased cultivation – Improved seeds, agricultural practices and improved farming technologies

Increased household consumption of millets from own production

Introduction processing machineries

Value added products developed and marketed across 8 districts of Tamil Nadu – FPO and federations

Area under cultivation of minor millets and finger millet in the Kolli Hills, 2000-22, in ha

Source: Department of Statistics - Namakkal

Integrated Fish Farming System and post harvest management

- Maximum diversified farm output with minimum financial and labour costs.
 - Family farming
 - Increase productivity
 - Recycling of waste
 - Income round the year
 - Value addition and marketing



Nutrition Awareness – Behavioural Change Communication

- Rashitrya Poshan Maah
- Nutrition awareness: Activities related to nutrition and health –in schools & colleges–Competition
- Training community champions on health and nutrition
- Integrating a more comprehensive behavior change program @ all levels –IEC material distribution, message through digital platform, community-based events and dissemination, capacity building of AWW and SHGs, community mobilization and action





- **MSSRF-UNICEF study** - to map the agro-climatic and socio-economic factors behind malnutrition among 7-14 years' school going children, 15-19 years' adolescent girls, pregnant and lactating mothers

- **Triple 'A' approach for Nutrition (Assess, Analyse and Action):** Regular institutional digital monitoring of school going children and adolescent girls to make them more health conscious as well as to improve their attitude and practices towards healthy diet.
- **Including culturally acceptable and locally available nutritious food:** Dry moringa soup mix, dried Amla and Groundnuts could be provided to pregnant women as THR under ICDS
- **Ensuring consistency in the services delivery:** Recipe management in terms of price volatility in school meals
- **Diversification of culturally appropriate food can be provided under Government services:** Eg. Per capita consumption of fish is high in Tamil Nadu. Therefore, fish or fish-based food items could be included in SNP or MDM programme.

Policy Recommendations

- Use social safety net programs (MDM, ICDS, PDS) to improve nutritional security of poorest households
- Link farmers with local procurement for these programs
- Funding for nutrition gardens in all Anganwadis and schools
- Nutrition education and BCC targeting adolescents and youth
- Ban advertising of sugar sweetened beverages
- Regulate advertising and make front of pack labelling compulsory
- More research to study effectiveness of these interventions, special focus on complementary feeding



Thank you