

# Farming Systems for Nutrition

## Brief Presentation to Stakeholders

23 Dec 2013, Bhubaneswar



# LANSA Research Programme

How can agriculture and agri-food systems contribute to improved nutrition in the region?

## Focus countries

- 🔥 Afghanistan
- 🔥 Bangladesh
- 🔥 India
- 🔥 Pakistan



# Partners and donor



- ❖ MS Swaminathan Research Foundation (Lead Institution)
- ❖ BRAC, Bangladesh
- ❖ Collective for Social Science Research, Pakistan
- ❖ Institute of Development Studies, UK
- ❖ International Food Policy Research Institute, USA
- ❖ Leverhulme Centre for Integrative Research on Agriculture and Health UK



❖ Programme funded by UK government



# Three research and crosscutting themes



- ❖ Enabling Environments to link Agriculture & Nutrition
- ❖ Agri-food Policies & Value Chains – Impact on nutrition
- ❖ Nutrition Sensitive Agriculture Intervention
  - ❖ Gender
  - ❖ Fragility
  - ❖ Innovation systems



# Problem Identification

- ❑ Calorie Deprivation: Due to inadequate food intake than recommended standards
- ❑ Protein Hunger: Inadequate protein intake (both plant & animal)
- ❑ Hidden Hunger:

*Agricultural Remedies for Nutritional Maladies (Prof. M S Swaminathan)*

with special reference to Iron, Vitamins, and essential minerals.



# Farming System for Nutrition -A pro-nutrition agriculture intervention

FSN intervention consists of a design that integrates nutritious crops (both natural and bio-fortified), livestock, poultry, fisheries and forestry, tailor made to address the nutrition needs of rural families



# FSN: Prof. Swaminathan

- ❑ *In some “hunger hot spots” of the world where agriculture is the backbone of survival, as in sub-Saharan Africa and South Asia, mainstreaming nutrition in agriculture programs is the most effective and low-cost method of eliminating malnutrition.*
- ❑ *This requires greater attention to the net income of smallholder farmers, whose women food producers have particular needs that require specific policies and support. As an example, the MSSRF in Chennai, India, has designed a Farming System for Nutrition initiative, comprising specific steps.*
- ❑ *This include carrying out a nutritional survey of the area and identifying the major causes of chronic and hidden hunger, and redesigning the farming system so that specific agricultural remedies are introduced for each nutritional malady, such as the cultivation of biofortified crops and crop-livestock integration.*





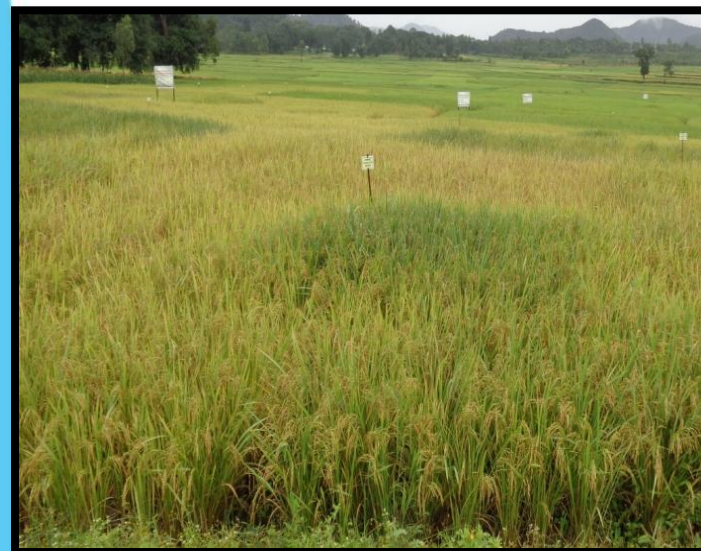
# Goal: Every Farm a Nutri Farm

## Output:

- Acceptance and adoption of nutrition-sensitive agriculture through FSN
- Yield and income enhancement
- Better intake of nutritious food and improvement in nutritional status

## Outcome:

- Behaviour change to ameliorate nutritional maladies with agricultural remedies
- Model for FSN advocacy
- Uptake - harmonising nutrition-sensitive multi-sectoral policies of the Government at all levels

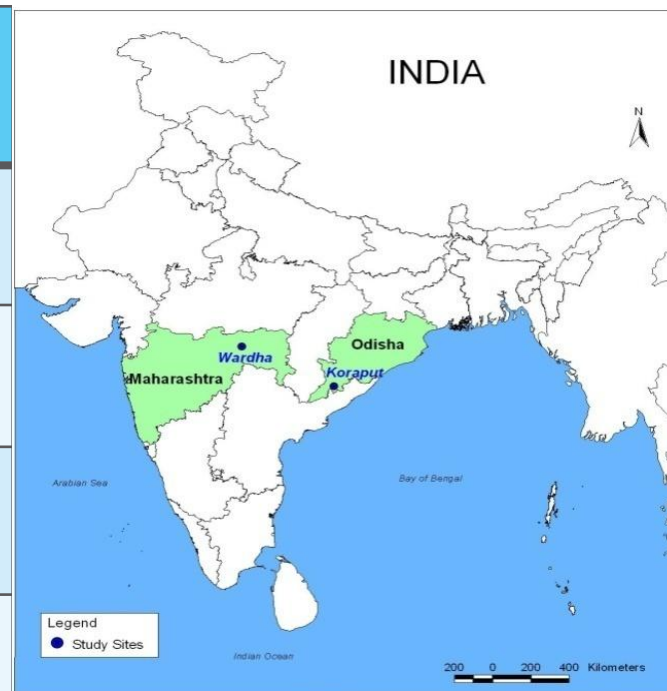




# FSN Intervention Sites

Being implemented in villages in Koraput, Odisha & Wardha, Maharashtra

Parameters	Wardha	Koraput
Weight-for-age	52.5%	43.5%
Anemia (Children)	76.7%	49.4%
Anemia (Adolescent Girls)	36.7%	59.5%
Anemia (Pregnant Women)	88.2%	65.3%



Source: DLHS 2 (2002-04)

# Steps in FSN Intervention

Step-1

- Primary survey of the treatment and control villages to understand the existing agricultural systems and socio-economic condition. Identification of key informants and village institutions.

Step-2

- Constitute Technology Platform for interaction with Academics, Research Institutions, KVVKs, and Stakeholders platform with government line department, local self government, farmers, women representatives and NGOs.

Step-3

- Frontline demonstration in Farmers plot on cropping, livestock and horticultural systems to showcase the scientific and technological advancement in farming.

Step-4

- Identify the nutritional disorders / deficiencies prevailing in the area (both protein-energy malnutrition and hidden hunger) through range of surveys. Collection of household level anthropometric and gender disaggregated information

Step-5

- Focus group discussions to understand nutrition sensitivity among the population in control group, gender role in decision making and access to resources.

Step-6

- Based on the agro-ecological and socio-economic conditions, design farming systems which can provide agricultural remedies to the prevailing nutritional maladies.

Step-7

- Develop in association with the farming families a Nutrition-Smart Farming System. Major components of such a Farming System will be the following. Crop-livestock-integration – large and small ruminants, poultry, trees, fish etc.

Step-8

- Content development for dissemination of improved agriculture practices; exposure trips and training programmes

Step-9

- Content development for nutrition education/literacy for all levels to improve awareness on dietary diversity, storage & cooking practices, health and hygiene etc.

Step-10

- Integrate the existing government program and entitlements with the intervention to achieve greater impact.

# Intervention Envisaged

- ❑ Cropping system Intervention: Targeting the farm families engaged in cultivation.
- ❑ Livestock system Intervention: Rural households who do not have land but raise livestock with special reference to backyard livestock rearing.
- ❑ Homestead & Nutri-garden Intervention: Here the households who have homestead land will be targeted



Apart from the above, general interventions will be on Nutrition message at various levels in the targeted villages, best practices for raising the field crops, livestock, silvipasture and vegetables. Ensure linking all household with other entitlements and WASH.

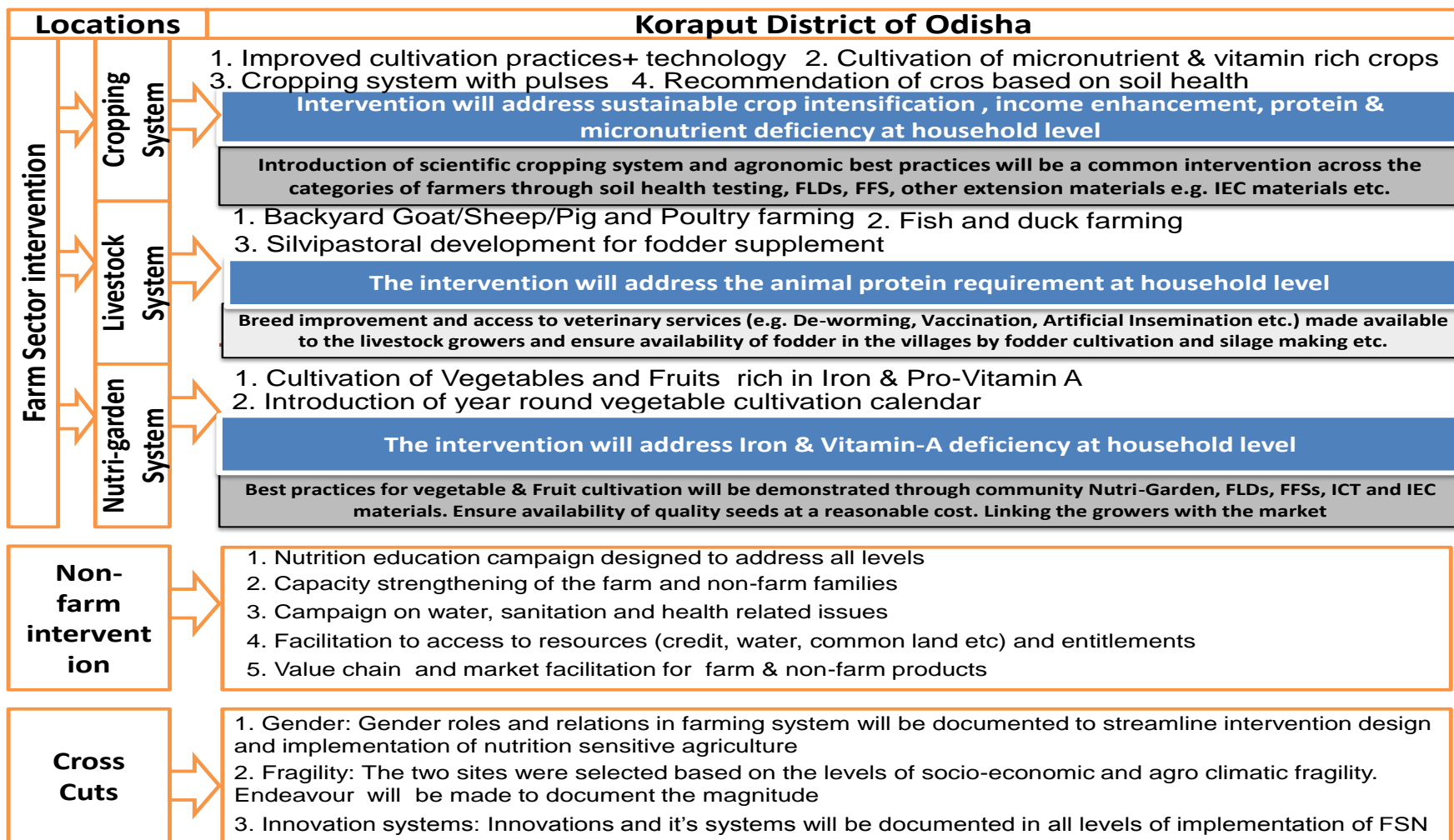




# Strategies of FSN Intervention



**LANSA**  
Leveraging Agriculture for  
Nutrition in South Asia



# Measurement Indicators of FSN

<i>Output Indicators</i>	<i>Outcome Indicators</i>	<i>Impact Indicators</i>
<b>1. Farm Indicators</b>		
Access to resources by women and men farmers	Change in Income and time use pattern	Resources allocation & empowerment
Adoption of new techniques/technology by women & men farmers	Reduction in drudgery; Change in time use pattern	Changes in lifestyle
<b>2. Non-farm Indicators</b>		
Penetration of nutrition literacy among women and men	Informed decision making	Health & nutrition status; Behavioural change
Access to WASH among women & men	Change in morbidity and time use pattern	
No. of gender sensitive IEC materials (e.g. IYCF)	KAP (Knowledge Attitude Practice)	
<b>3. Nutrition Indicators</b>		
Food intake pattern of women and men a) Calorie b) Protein c) Micronutrient	Change in nutritional status of women and men: a) Anthropometry indices, b) Anemia status, c) Vit A status d) Seasonal variation	Dietary Diversification; Nutritional adequacy
<b>4. Capacity Building Indicators</b>		
No. of men and women farmers trained in FSN	KAP	Behavioural Change
<b>5. Research Uptake Indicators</b>		
Evidence dissemination	Gender sensitization of Stakeholders and Policy elite	Policy Change



# Guidance/Suggestions requested from the Stakeholder Platform

- Interventions
- Support
- Effectively address gender, social inclusion
- Impact measurement Indicators





Thank you



Further details are available in our websites:  
[www.mssrf.org](http://www.mssrf.org) and [www.lansasouthasia.org](http://www.lansasouthasia.org)