Nutritional status of women and men : insights from VDSA villages

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Introduction

- SOFA suggests 40% of labour use in agriculture is accounted for by women; Increased feminization of agricultural labour

- NFHS3 suggests 57% of rural Indian women are **anaemic** — unchanged over time → **lower labour productivity**

We want to test this using micro-level data

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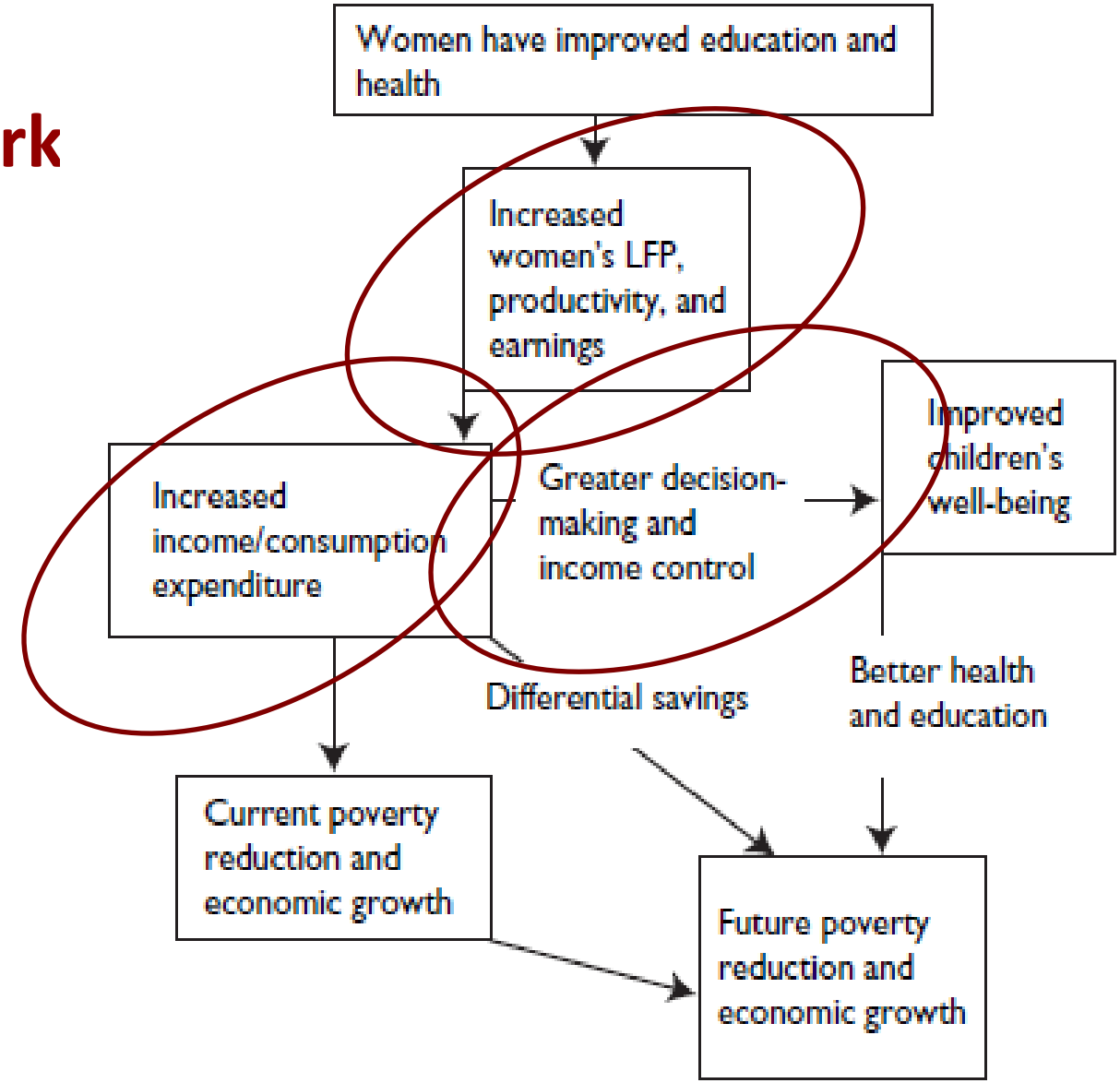
A simple framework



Source: Based on Morrison, Raju, and Sinha 2007.

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An introduction to the research activity

LEARNING FROM HER:
Gender Empowerment for Nutritional Outcomes

CGIAR Research Program on Policies, Institutions and Markets

Focus: Institutions, gender empowerment and nutrition outcomes

- Labor participation: Time-use patterns through 24-hour recall
- Social networks, assets, resources and decision making
- Empowerment of men and women
- Nutrition
  - ⇨ Dietary diversity
  - ⇨ Food consumption: 24-hour recall
  - ⇨ Morbidity pattern
  - ⇨ Reproductive history
  - ⇨ Health and sanitation
  - ⇨ Anthropometry

CGIAR RESEARCH PROGRAM ON Agriculture for Nutrition and Health

CGIAR RESEARCH PROGRAM ON Dryland Cereals

CGIAR RESEARCH PROGRAM ON Climate Change, Agriculture and Food Security — CCAFS

CGIAR RESEARCH PROGRAM ON Grain Legumes

Gender pathway

- *Time-use patterns*
- *Seasonality*
- *Anthropometry*
- *Dietary diversity*
- *Morbidity*
- *Health, water and sanitation*
- *Access and control*
- *Assets*
- *Decision making*
- *Nutrition knowledge and awareness*
- *Norms and attitudes*
- *Markets*

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Methodology

- A special purpose study under the VDSA – data is collected during the years 2013-2014; every quarter data is collected

- Data sources for analysis
  - The newly collected data on anthropometry, dietary diversity and decision making
  - The VDSA data for labor productivity
  - NFHS data for the years 2005 and 1998

- Preliminary descriptive analysis is presented here

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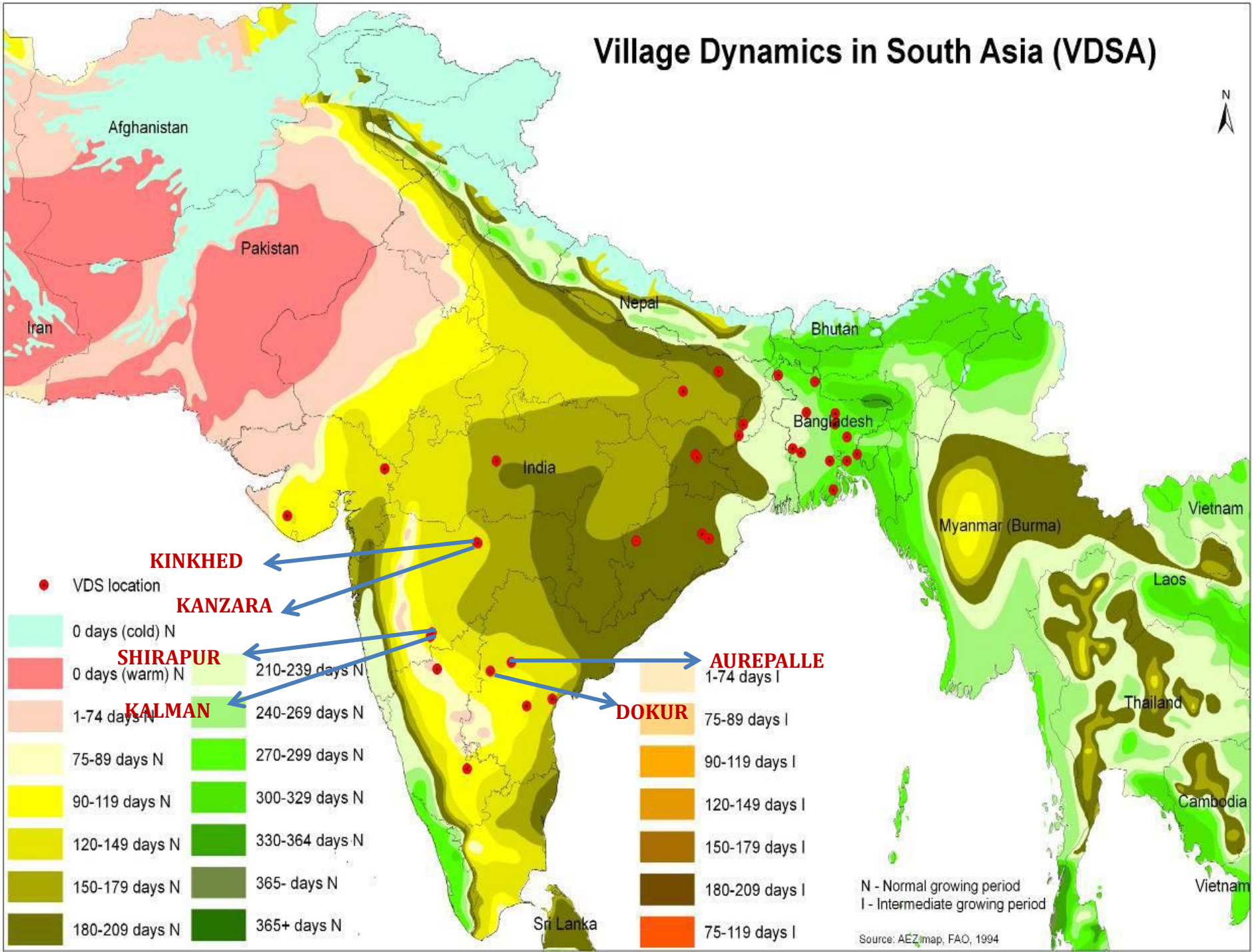
Village Dynamics in South Asia (VDSA)
N
Afghanistan
Pakistan
Iran
Nepal
Bhutan
Bangladesh
India
Myanmar (Burma)
Vietnam
Laos
Thailand
Cambodia
Vietnam
Sri Lanka
KINKHED
KANZARA
SHIRAPUR
KALMAN
AUREPALLE
DOKUR
VDS location
0 days (cold) N
0 days (warm) N
1-74 days N
75-89 days N
90-119 days N
120-149 days N
150-179 days N
180-209 days N
210-239 days N
240-269 days N
270-299 days N
300-329 days N
330-364 days N
365- days N
365+ days N
1-74 days I
75-89 days I
90-119 days I
120-149 days I
150-179 days I
180-209 days I
75-119 days I
N - Normal growing period
I - Intermediate growing period
Source: AEZ map, FAO, 1994

Gender analysis – Who does what to understand the roles and responsibilities of men and women in agriculture, 2013

Sl.No	Activity Name	Performance of activities by men and women in agriculture in	
		Telangana villages	Maharashtra villages
1	Land preparation	♂♀	♂
2	Selection of crop and Variety	♂♀	♂
3	Fertilizer and Manure application	♂♀	♂
4	Sowing	♀	♀
5	Irrigation	♂	♂
6	Interculture	♂	♂
7	Hand weeding	♀	♀
8	Harvesting	♂♀	♂♀
9	Threshing	♂♀	♂♀

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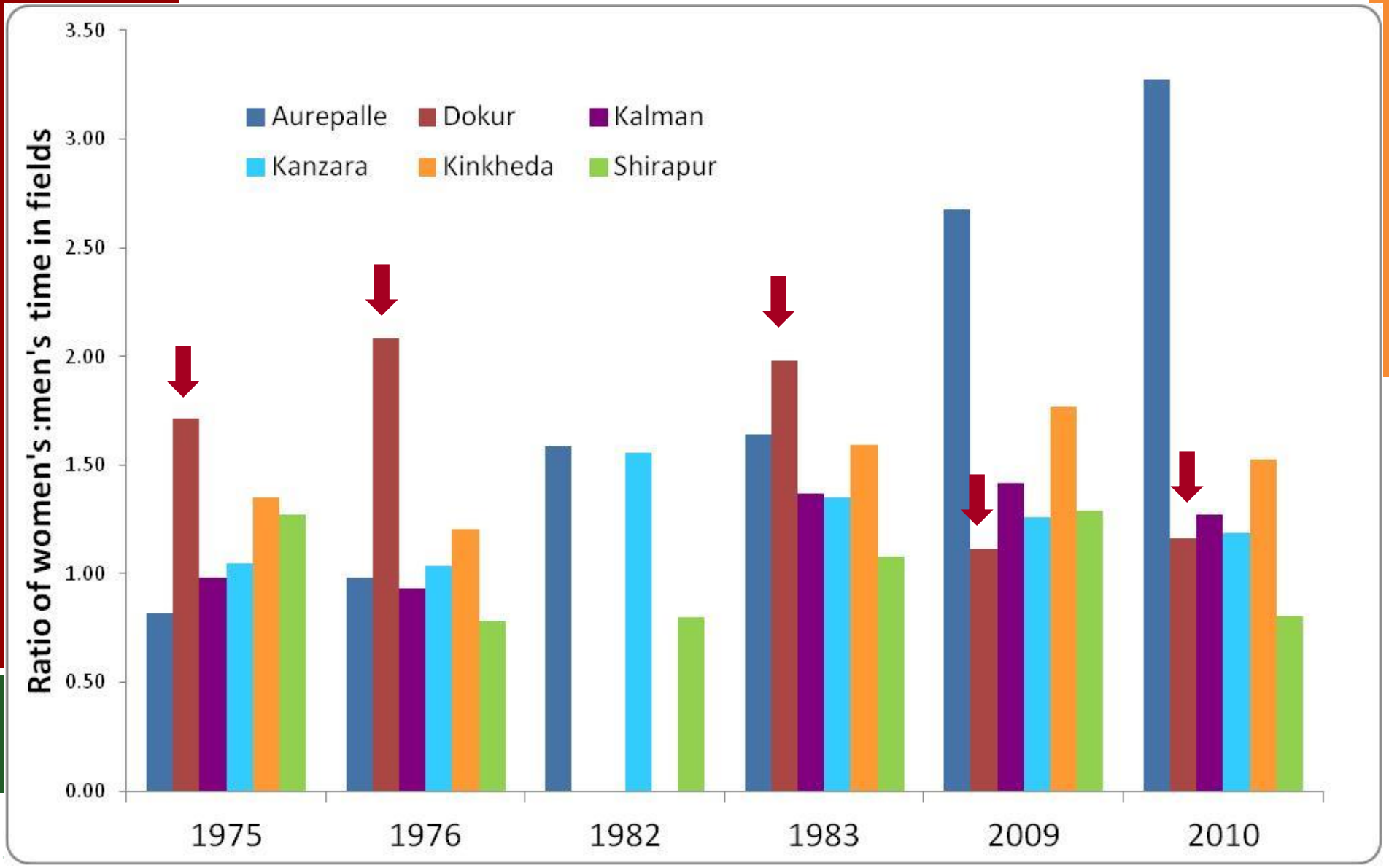
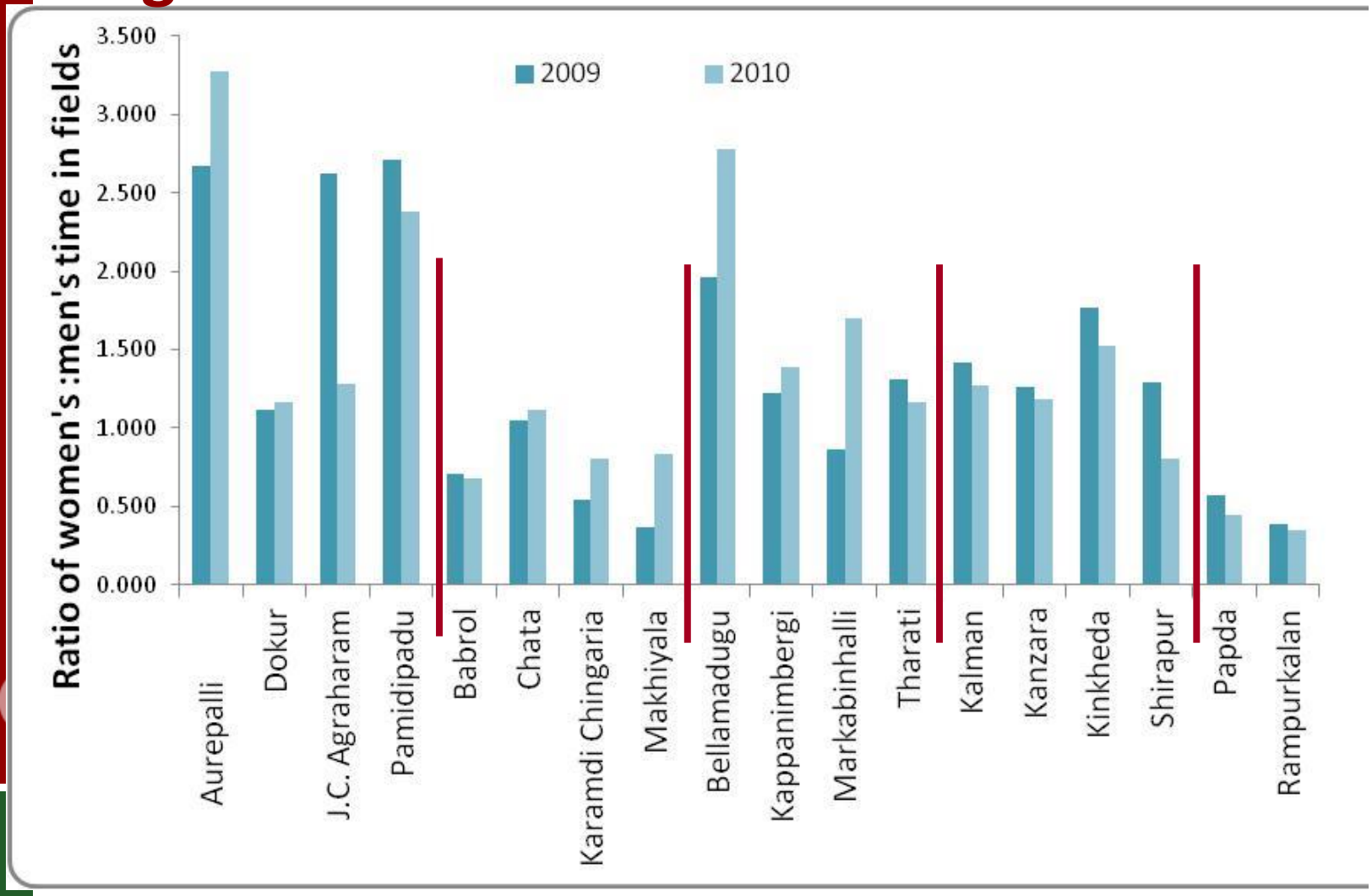
Labor participation of women and men in agriculture



Labor participation of women and men in agriculture



Diversity/variation in patterns- depending on the context

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Consumption Expenditure Patterns

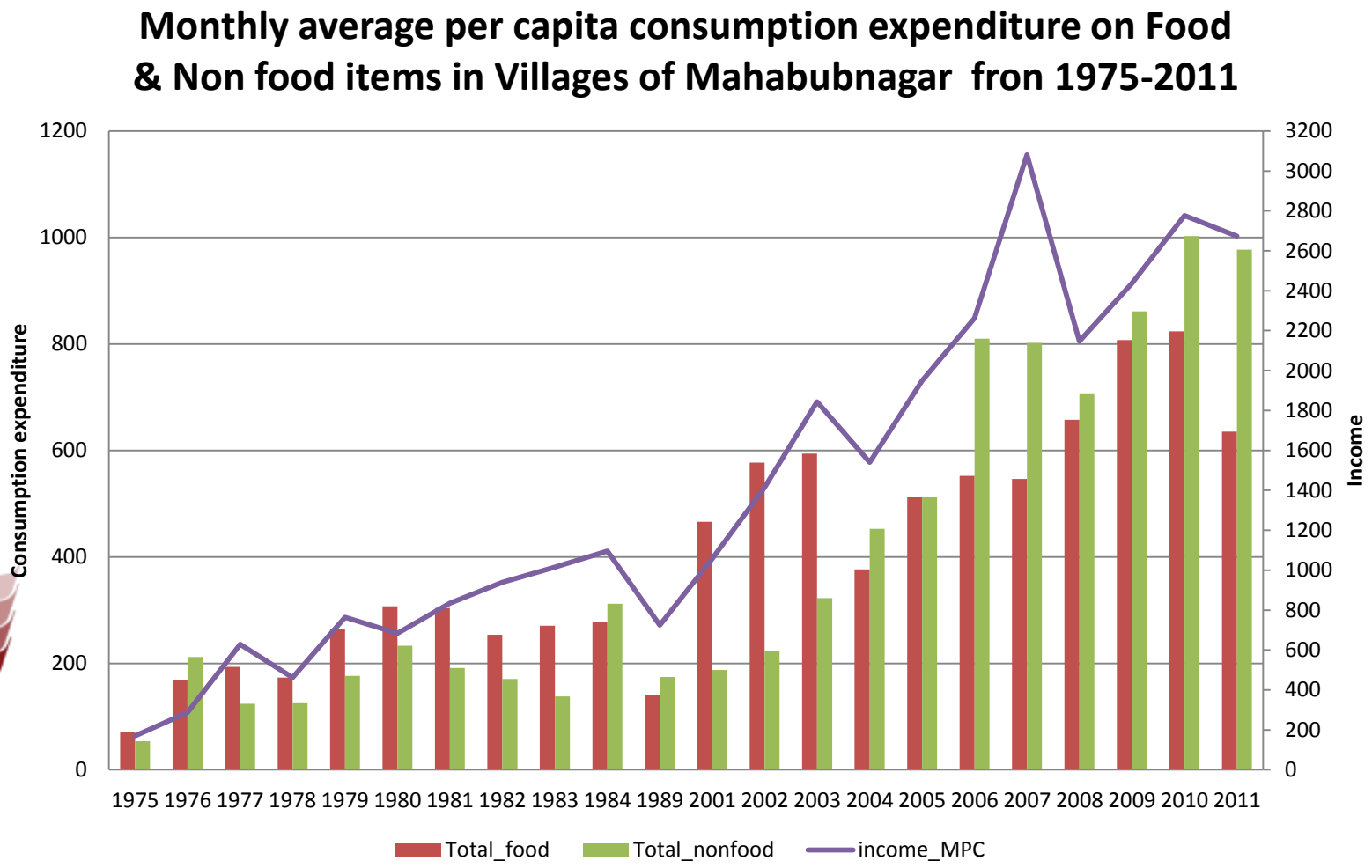

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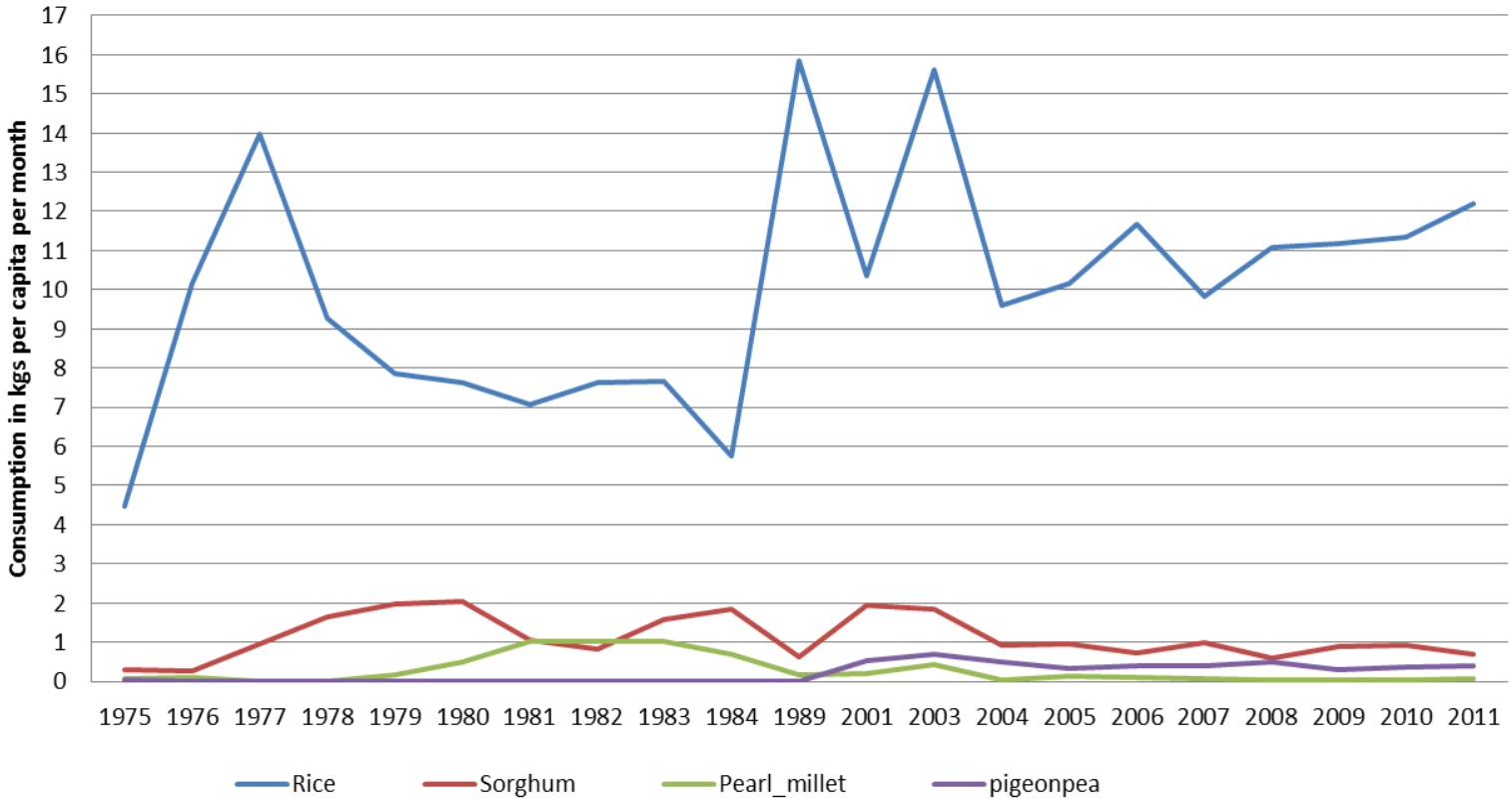
Figure 5. Percapita monthly consumption of major food grains, 1975-2011, Telangana villages



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Iron intake via food

	Average Percapita intake of Iron(mg.) micro nutrient in Andhra Pradesh state 1988-2010									
Year	Cereals	Pulses	Milk	Edible oils	Meat_fish	Vegetables	Fruits	Dry friuts	Other food items	Total Iron intake
1988	3.62	0.91	0.21	0.24	0.4	0.55	0.19	0.07	1.69	7.88
1993	2.99	0.83	0.24	0.38	0.36	0.81	0.15	0.09	2.06	7.91
1999	4.37	0.84	0.24	0.28	0.35	1	0.15	0.13	2.16	9.52
2004	4.32	0.84	0.26	0.24	0.26	0.8	0.27	0.1	1.94	9.03
2010	3.96	0.81	0.28	0.18	0.1	0.91	0.16	0.13	1.76	8.29

	Average Percapita intake of Iron(mg.) micro nutrient in Maharastra state 1988-2010									
Year	Cereals	Pulses	Milk	Edible oils	Meat_fish	Vegetables	Fruits	Dry friuts	Other food items	Total iron intake
1988	11.87	1.39	0.2	0.21	0.23	0.62	0.3	0.18	1.8	16.8
1993	11.33	1.03	0.21	0.29	0.09	0.78	0.19	0.2	1.82	15.94
1999	14.8	1.11	0.23	0.32	0.14	0.95	0.26	0.29	2.2	20.3
2004	14.25	1.09	0.22	0.19	0.13	1.02	0.31	0.3	2.17	19.68
2010	13.89	1.16	0.25	0.11	0.08	0.8	0.19	0.39	1.83	18.7

Source- NSSO data

Recommended – 18 mg

Cereals are the major source of iron; consumed in large quantities

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Anaemia in adolescent girls, Andhra Pradesh in 2005-06

Anemia Adoloscent girls					
Wealth index	Anaemia for adolescent girls				
Percent	Severe Anemic	Moderate Anemia	Mild Anemia	Non Anemia	Total
Poorest	0.44	1.82	5.35	1.78	9.38
Poorer	2.02	3.06	6.54	3.52	15.14
Middle	2.55	5.86	12.69	10.08	31.18
Richer	1.77	5.02	11.17	8.53	26.49
Richest	1.09	2.98	6.8	6.92	17.8
Total	7.87	18.75	42.55	30.84	100

Source: NFHS-3

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Anaemia in pregnant women, Andhra Pradesh 2005-06

Age group	Anaemia for pregnant women				
Percent	severe Anemic	Moderate Anemic	Mild Anemic	Non Anemic	Total
15-19	0.49	3.93	3.43	6.96	14.81
20-29	1.49	5.97	4.91	21.61	33.99
30-39	0.92	5.93	9.3	16.23	32.38
40-49	0	2.47	6.36	9.98	18.81
Total	2.9	18.3	24.01	54.79	100

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Anaemia in non-pregnant women, Andhra Pradesh 2005-06

Age 5-year groups	Anaemia status for non pregnant women				
Percent	Severe Anemic	Moderate Anemia	Mild Anemia	Non Anemia	Total
15-19	1.37	6.15	3.85	5.21	16.58
20-24	1.17	5.81	4.31	5.98	17.28
25-29	1.17	5.33	4.04	7.45	17.99
30-34	1.09	3.79	3.14	5.34	13.36
35-39	1.04	4.33	3.23	5.12	13.72
40-44	0.8	3.32	2.74	4.68	11.53
45-49	0.55	3.08	2.08	3.83	9.53
Total	7.2	31.8	23.4	37.6	100

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Anaemia in men, Andhra Pradesh 2005-06

Age group	Anaemia level				
Percent	Severe	Moderate	Mild	Not Anemic	Total
15-19	0	0.09	0.04	0.08	0.21
20-29	3.34	12.27	3.25	2.7	22.21
30-39	4.1	17.38	7.91	6.24	36.97
40-49	3.95	13.94	5.86	5.26	30.06
Total	12.49	48.37	20.13	15.66	100

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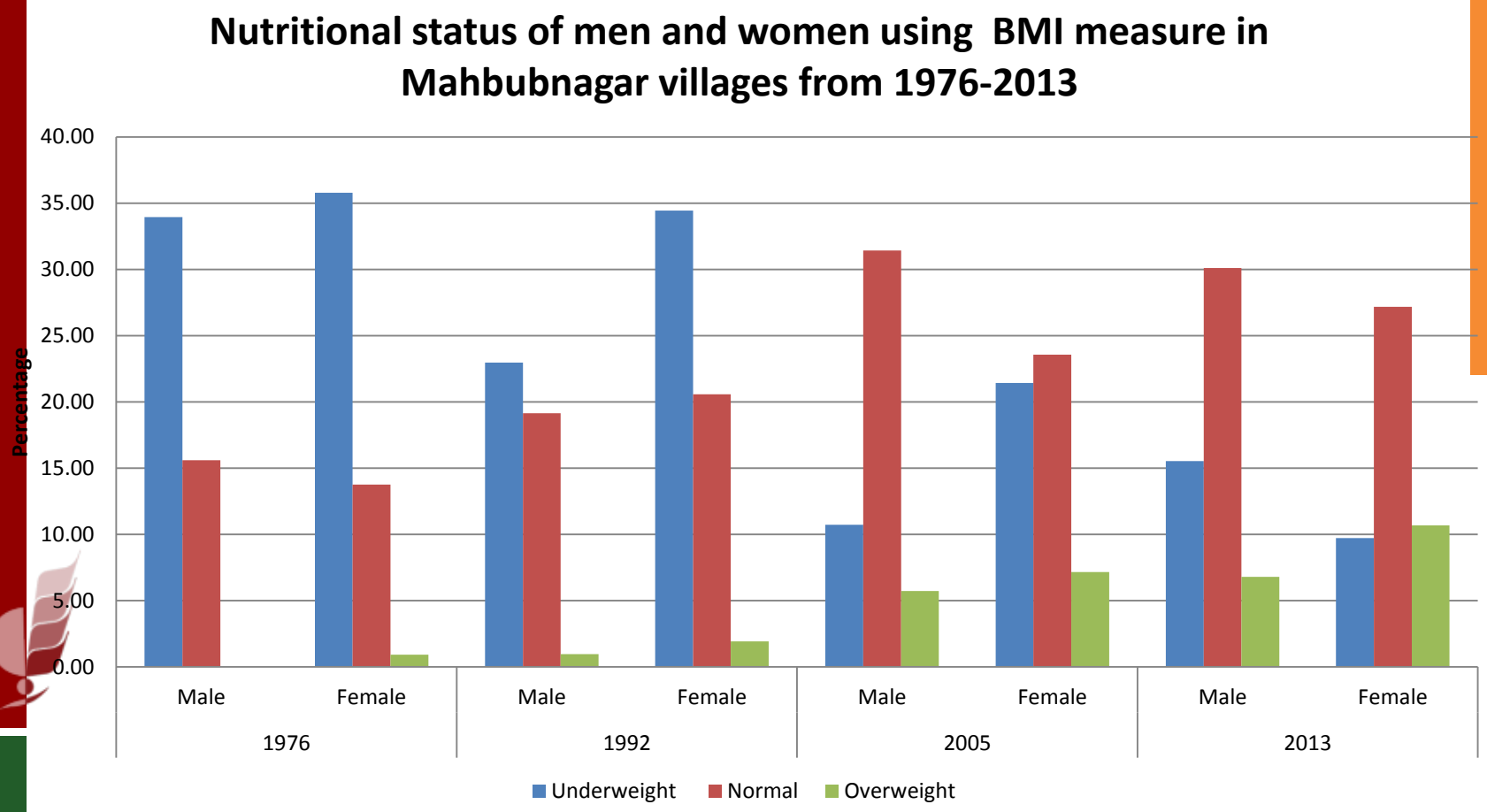
Nutritional Status of Adults



Conclusions

- The BMI as an indicator of nutrition indicates that there is progress in term of nutritional status of men and women
- Villages are experiencing the double burden of malnutrition
- Anemia continues to be a major health concern for both women and men
- Fortification of cereals with Iron and Zn is a good strategy

Conclusions

- However, there needs to be other indicators that should be tracked over time to get a more accurate picture of nutritional status

  Eg. Dietary diversity scores

- This analysis only tells us about the nutrient availability by the individuals, it does not tell us about the absorption by the body.
- The 24-hr surveys on food intake will be able to give us this detailed information on consumption as well as the inhibiting factors
- This is work in progress and more detailed analysis will give us the true picture of the nutritional status of men and women in rural India

Thank You..

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