

Determinants of Food and Nutrition security of tribal communities in the Hill and Mountain Regions: Empirical Evidence from Northeast India

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Towards Food Equity ?

BIG Question in 2014 : How do we ensure a ***sustainable*** food system in the Global South?

BIG Question in 2024: How do we have a better understanding of ***Agriculture-Disruptions-Nutrition*** nexus for a sustainable and ***equitable*** food system?

Why do we need to focus on Food Security and Nutrition (FSN) issues for indigenous and/or tribal communities in the Global South?

ICSD 2023

3A. Sustainable development of mountain regions

Food security means....

When “all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active healthy life”
(*World Food Summit of 1996*)

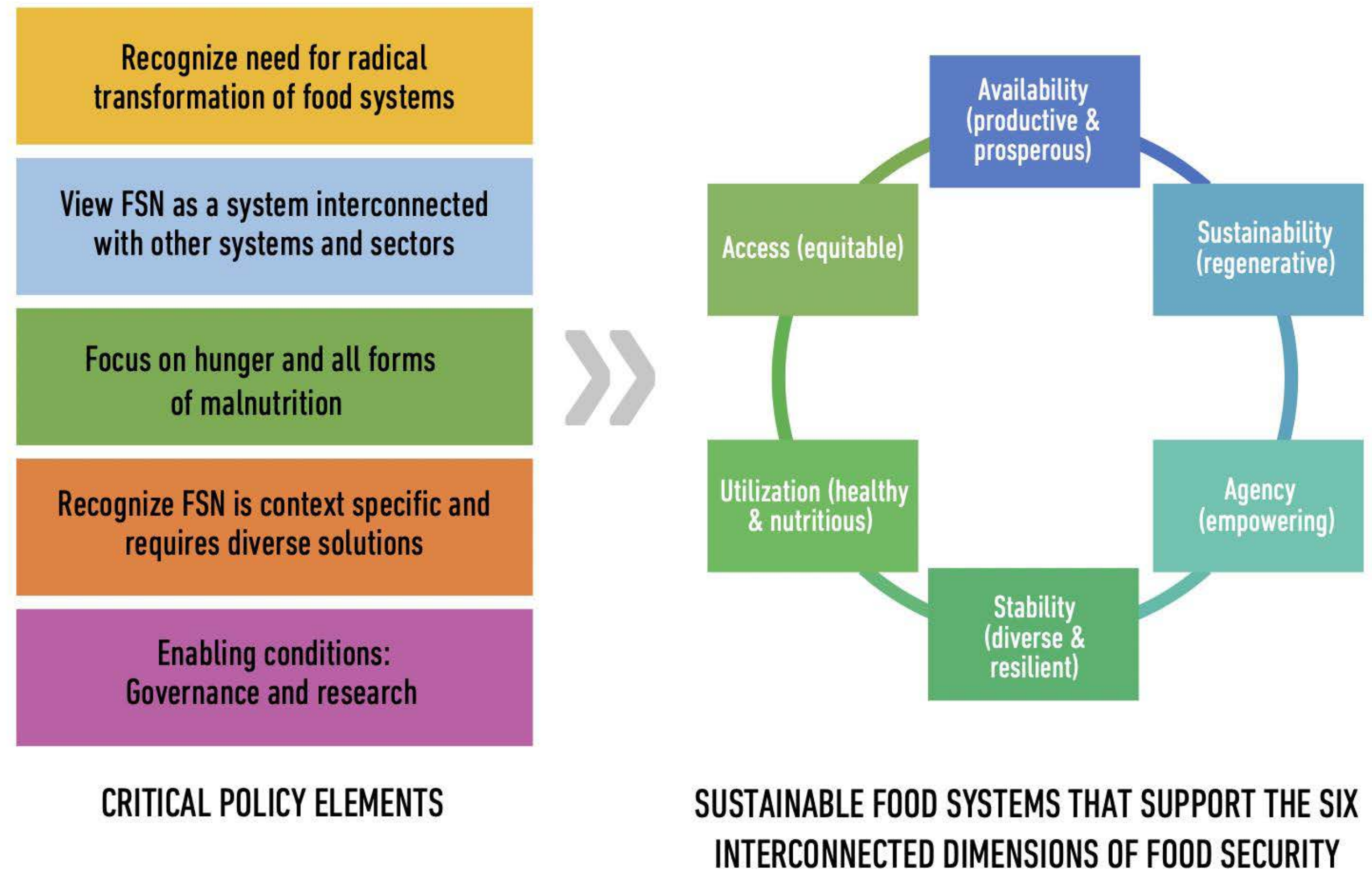
MDG 1c: Halve, between 1990-2015, the proportion of people who suffer from hunger

SDG 2

End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

Critical shifts in FSN

High Level Panel of Experts (HLPE) Report December 2023



Geography: Nagaland

Why Food Security in the Mountain and Hill Region?

High climate vulnerability : small scale rain-fed farmers

Limited food production and access to market

Outmigration & Diminishing farming population

Shift from traditional to modern cropping practices centred around

Why Nagaland?

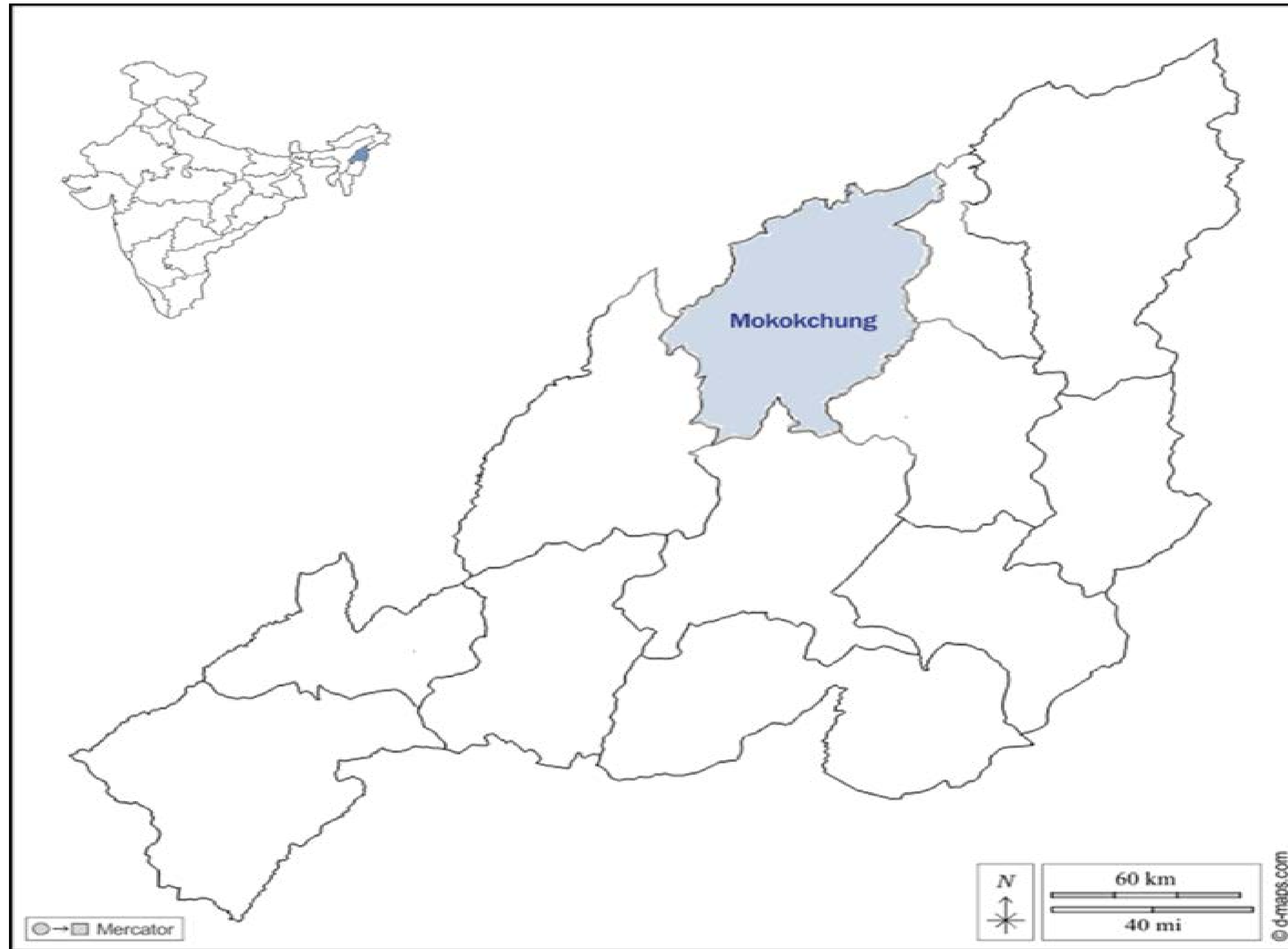
The Himalayan region is the most densely populated mountain region

Majority of farmers are still opting for shift cultivation

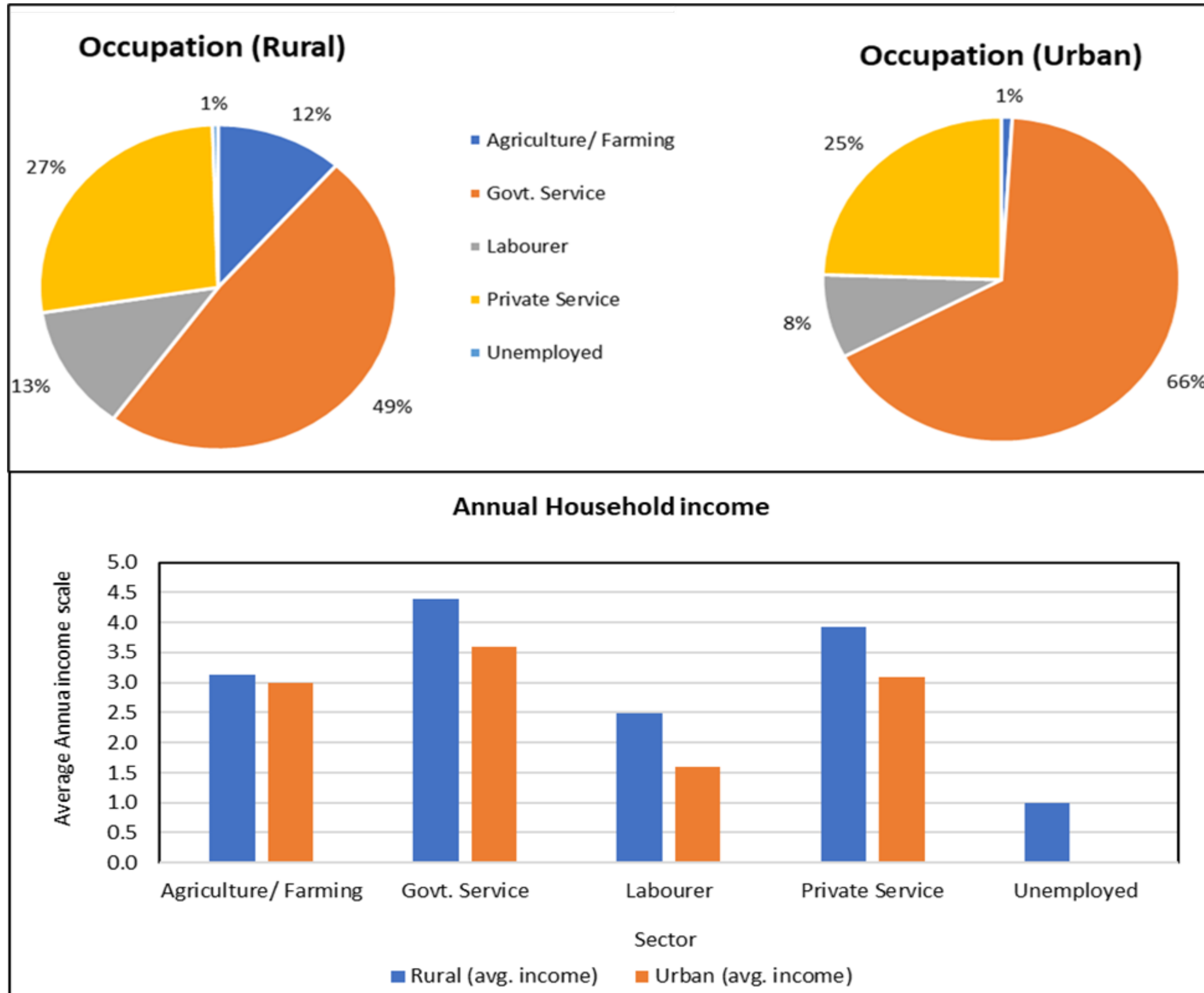
Dietary change

- (i) social media induced lifestyle change; and**
- (ii) development of food market**

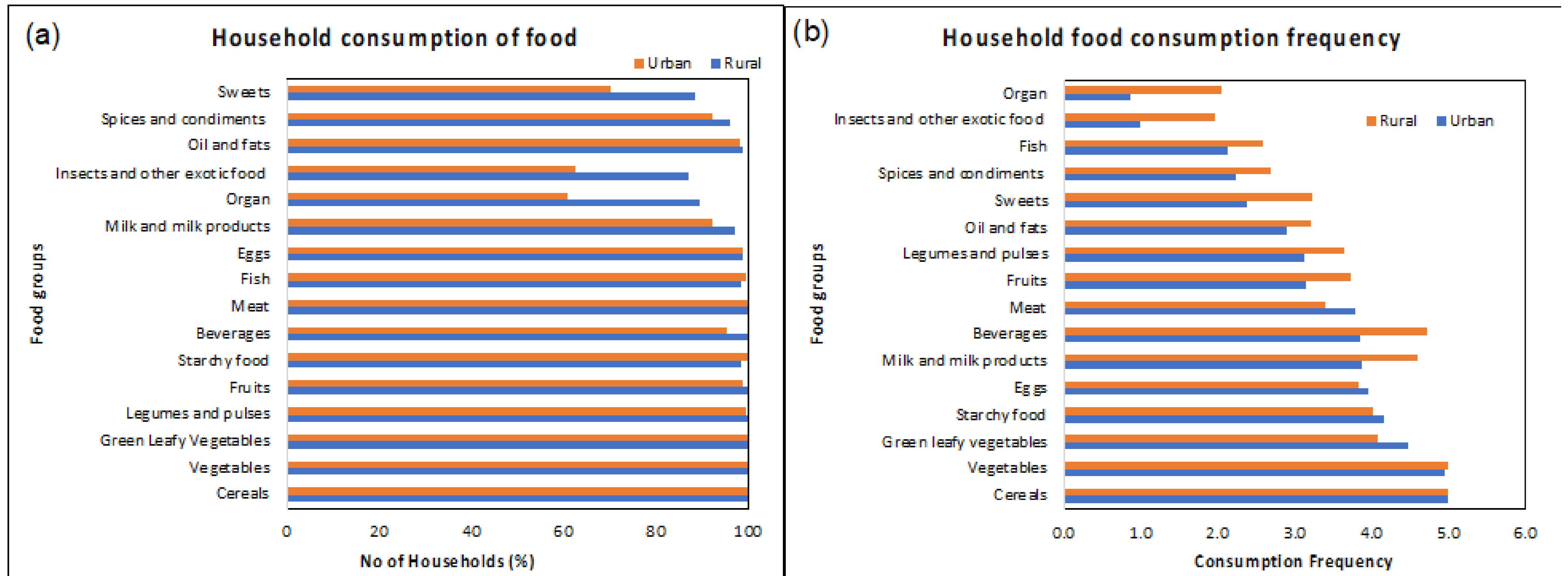
Why *Mokukchong* district?



Socioeconomic Profile

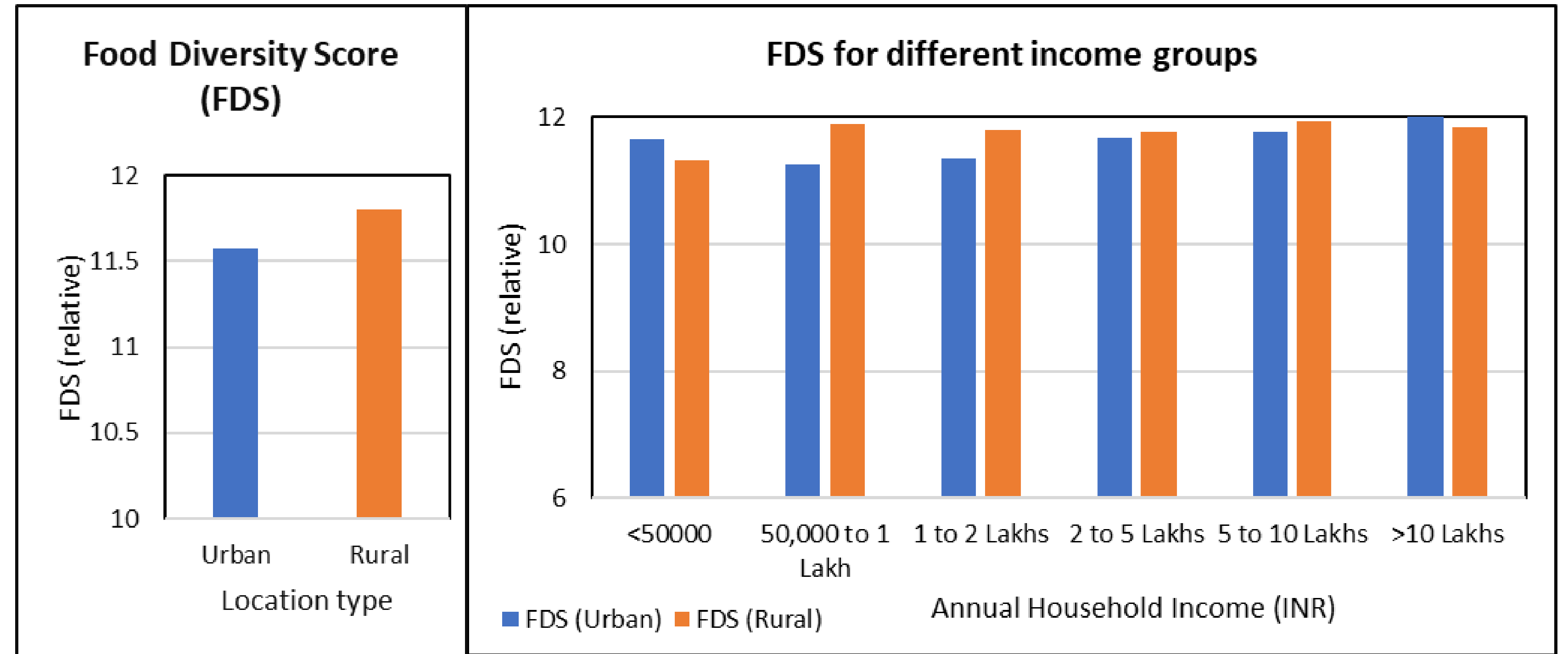


Food Consumption Pattern



Food Diversity Score (FDS)

Cereals
White tubers and roots
Vegetables
Fruits
Meat
Eggs
Fish and other seafood
Legumes, nuts and seeds
Milk and milk products
Oils and fats
Sweets (sugar/honey)
Spices, condiments and
beverages (miscellaneous)



Food groups/ Consumption pattern	Income		Education	
	Urban	Rural	Urban	Rural
Meat	0.016	0.367***	0.162**	0.225***
Insects and other exotic food	0.232***	-0.171**	-0.134*	-0.143**
Vegetables	0.255***	0.053	0.074	-0.002
Fruits	0.454***	0.431***	0.246***	0.289***
Milk and milk products	0.193***	0.167**	0.049	0.188***
Beverages	0.321***	-0.143**	0.027	-0.107
Sweets	0.200***	0.231***	0.011	0.119*
Biscuits and cakes	0.221***	0.245***	0.132*	0.085
Noodles (not instant noodles and pasta	0.136**	0.308***	0.186***	0.238***
Instant Noodles (maggi, ramen, etc)	0.051	0.307***	0.034	0.186***
Snacks- bhujia, chips, etc	0.479***	0.210***	0.141**	0.012
Confectionaries	0.285***	0.077	0.077	0.165**
Beverages	0.339***	-0.180**	0.043	-0.121*
UPF Consumption Score	0.346***	0.251***	0.100	0.164**
FDS	0.132**	0.141**	0.078	-0.024
Food Away From Home (FAFH)	0.232***	0.407***	0.315***	0.172**
FAFH Restaurants/ food joints/ food stalls	0.394***	0.534***	0.347***	0.379***
FAFH Friends/ neighbors/ relatives	-0.036	0.409***	0.102	0.139**
FAFH Community meal	0.086	0.448***	-0.005	0.170**
No of snacks during the day (Including bed tea)	0.188***	0.079	0.140**	0.142**
No of meals per day	-0.008	-0.064	0.004	-0.244***

Concluding remarks (preliminary)

Rural households have a higher Food Diversity Score (FDS) than urban households with much higher consumption of traditional foods like organs and insects, which are good protein and nutrient sources.

Although meat consumption is higher for urban households in general, there is a positive association between female education and meat consumption in rural areas.

Education also has weak but statistically significant linkage with no. of meal consumed per day suggesting the influence of female literacy on food consumption pattern.

Concluding remarks (preliminary)

Paid FAFH is positively related with income and education in both areas, the unpaid FAFH is positively correlated with income and education only in rural areas, partly because of higher social capital in the rural areas.

Both education and income have a positive association with number of snacks during the day for both rural and urban household heads.

Higher HH income is also linked with an increase in consumption of unhealthier UPF and FAFH.

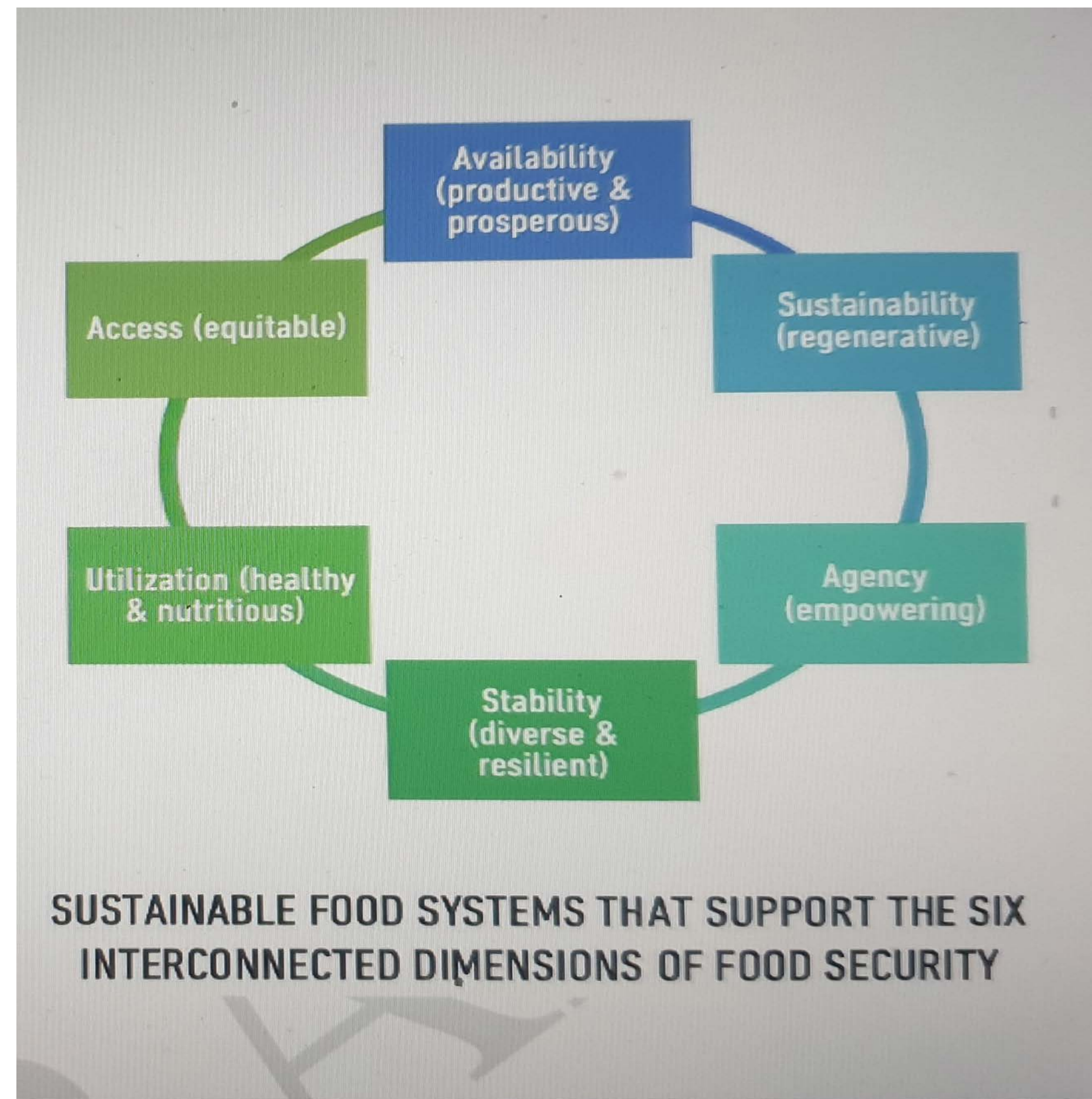
Towards Food Equity

BIG Questions in 2024: How do we have a better understanding of ***Agriculture-Disruptions-Nutrition*** nexus for a sustainable and **equitable** food system?

My Questions for 2025-2028

1 Are we measuring the right things?

2. How do we interpret and evaluate **intersectionality** for **women/minorities/displaced/indigenous groups**?





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