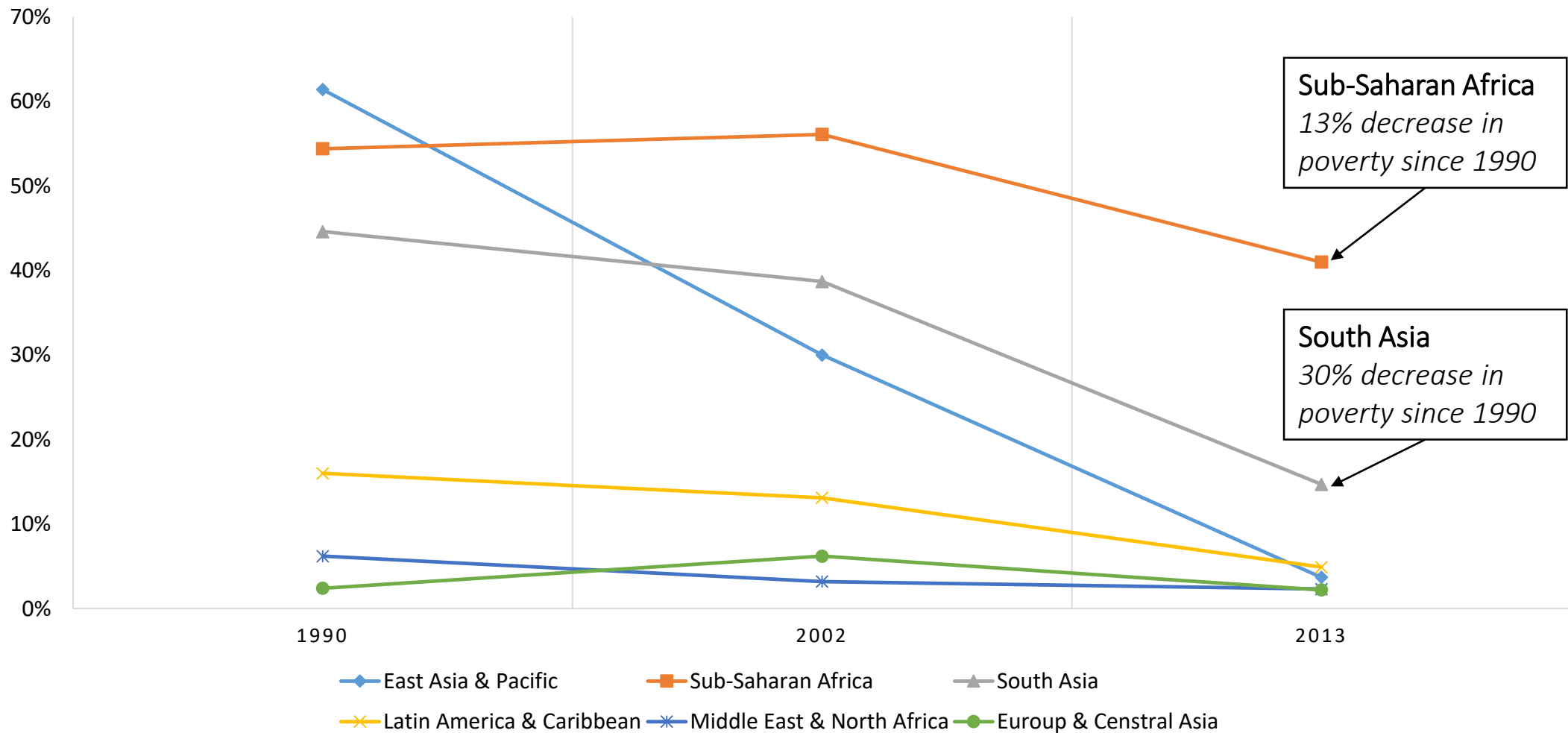


Strengthening Nutrition and Improving Livelihoods via Agricultural Extension and Marketing

Han Bum Lee, Ph.D.

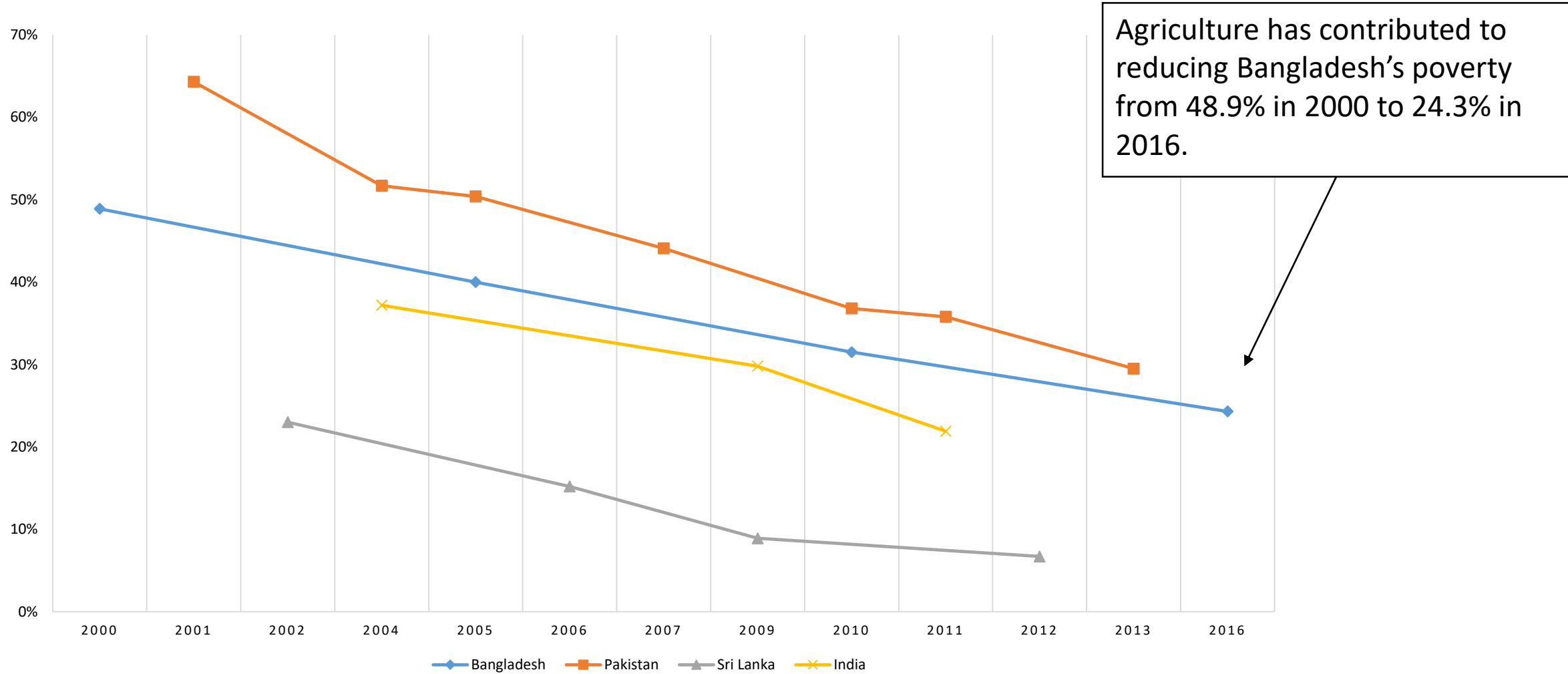


Poverty headcount ratio at \$1.90 a day (% of population)



Source: World Bank. (<http://data.worldbank.org>)

Poverty headcount ratio at \$1.90 a day (% of population): Some countries in South Asia



Source: World Bank. (<http://data.worldbank.org>)

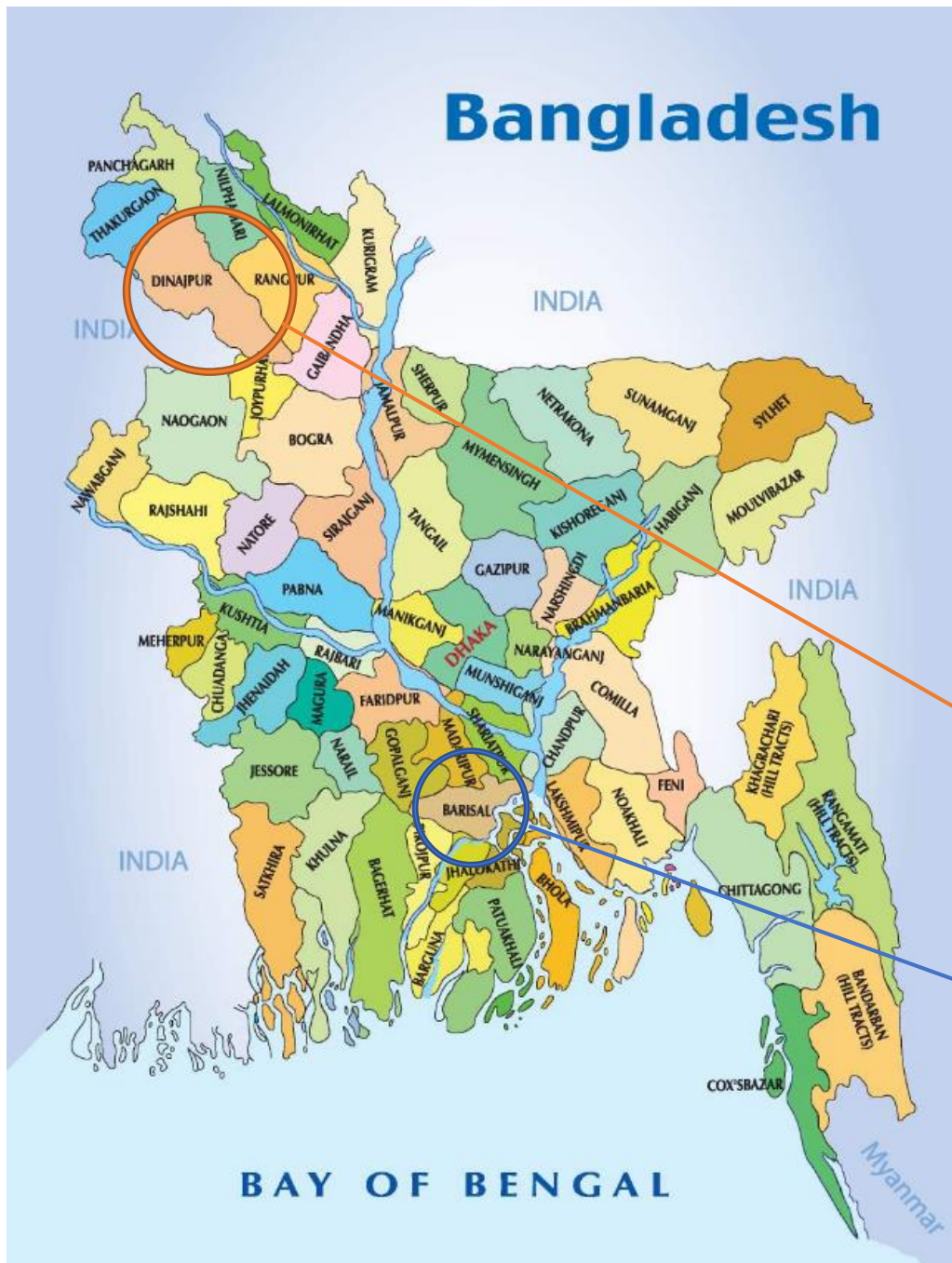
Despite significant economic progress and poverty reduction, considerable challenges remain...

- A quarter of Bangladesh's population remains food insecure
- Low dietary diversity – 70% of the diet comprised of cereals
- Stunting affects almost half of children (7 m.), more prevalent in rural areas
- Only 21% of children, 6-23 months old, are receiving a minimum acceptable diet
- A quarter of women of reproductive age are undernourished
- Micronutrient deficiencies are widespread, driving high rates of anemia in women and children

Source: Bangladesh nutrition profile, USAID. (<https://www.usaid.gov/what-we-do/global-health/nutrition/countries/bangladesh-nutrition-profile>)

Women in Bangladesh often face socioeconomic and cultural constraints

- Provide consistent evidence of gender-specific constraints in poor rural women's access to extension services
- Women in poor households have higher opportunity costs of time due to their various livelihood activities and responsibilities
- Restrictions on women's physical mobility beyond her homestead or community and on selling homestead products in markets
- Women have less decision-making autonomy granted in access to and use of household resources, agricultural production, and consumption



Agriculture has played a key role in reducing poverty from 48.9% in 2000 to 31.5% by 2010.

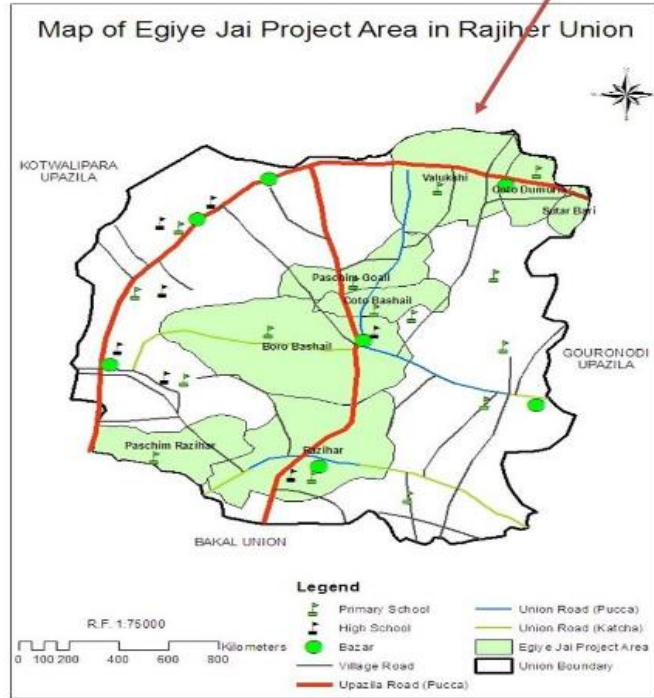
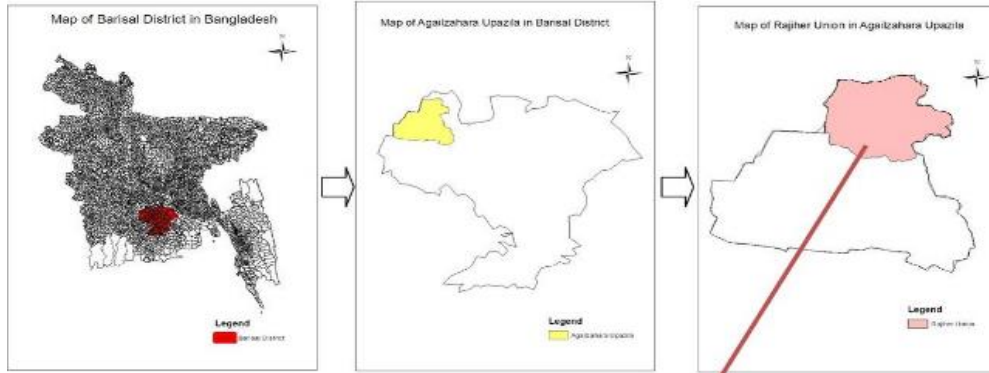
People living in the flash flood and drought-prone districts in the northwest and the saline-affected tidal surge areas in the south still suffer from more severe food insecurity and higher poverty than the national average.

(World Bank 2016)

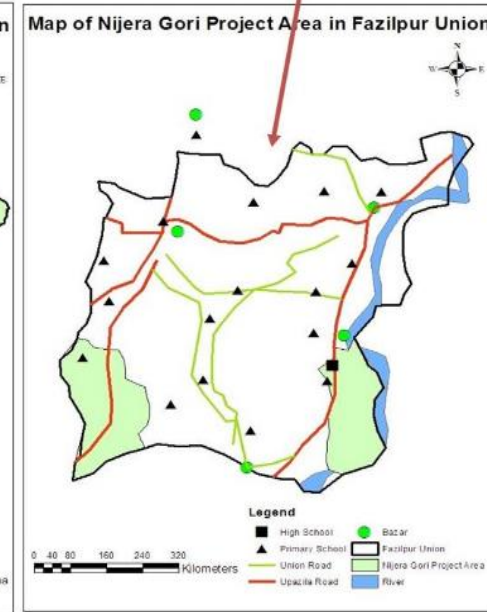
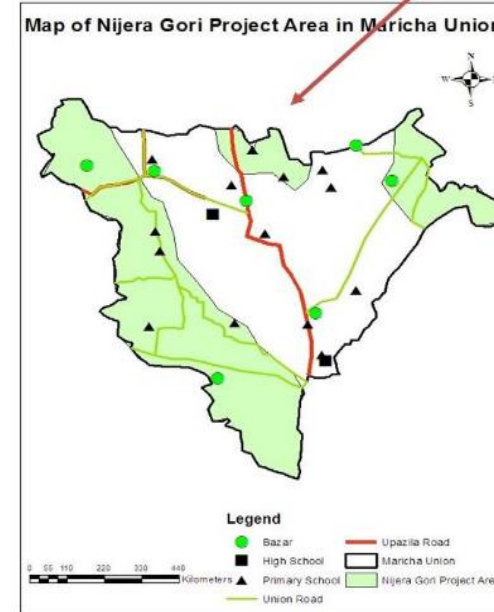
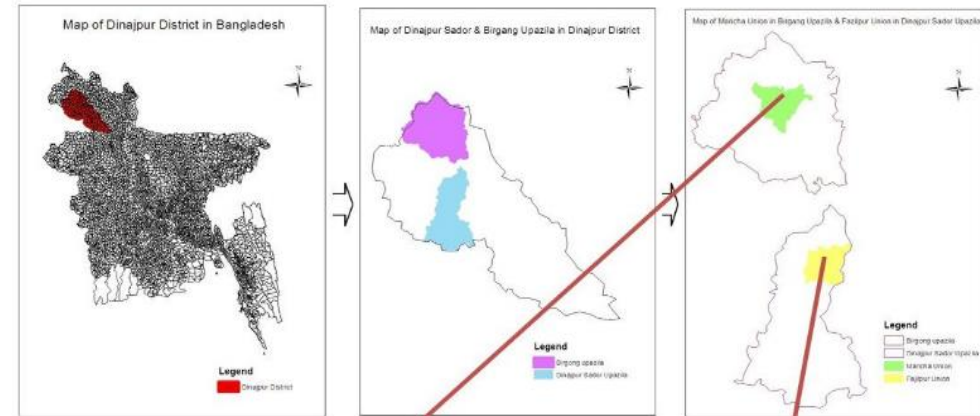
Nijera Gori (“We Build it Ourselves”)

Egiye Jai (“Move Forward”)

Map of Egiye Jai Project Area in Respect of Bangladesh



Map of Nijera Gori Project Area in Respect of Bangladesh



Egiye Jai and Nijera Gori projects provide:

Egiye Jai & Nijera Gori (2013 - 2016)

Production-oriented Ag. practices
focusing on vegetable garden, livestock,
poultry, and fisheries

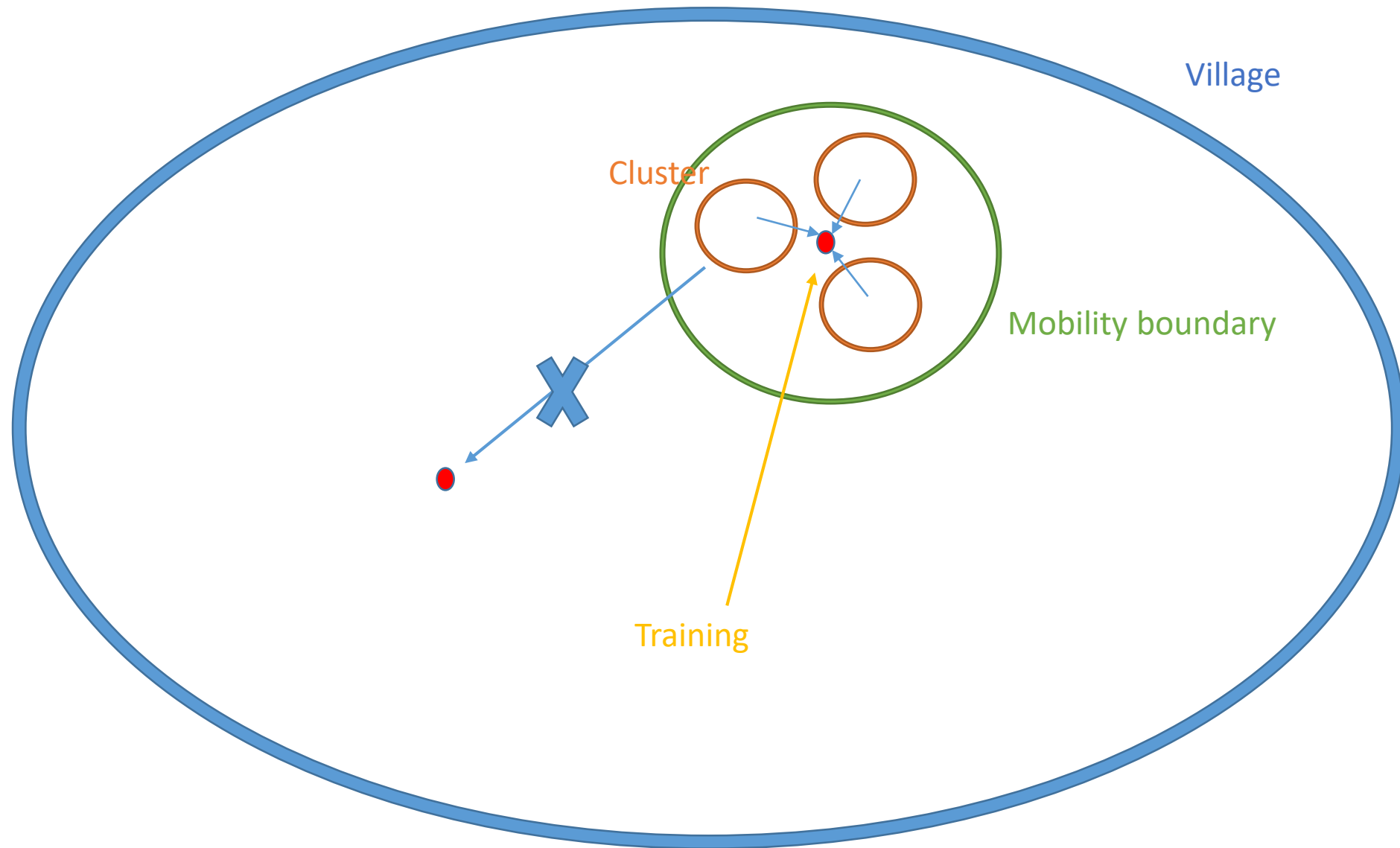
Cluster-level training

Linking farmers to markets via local
traders



*Regular vaccination, de-worming,
animal shelter cleaning and
maintenance, vermiculture, etc.*

Cluster-level training



Bangladesh agricultural extension projects provide:

Egiye Jai & Nijera Gori (2013 - 2016)

Production-oriented Ag. practices
focusing on vegetable garden, livestock,
poultry, and fisheries

Cluster-level training

Linking farmers to markets via local
traders

Promote women farmers' project participation

*Alleviating their time and spatial
constraints from cultural norm that
limits women's mobility beyond her
homestead or community*

“four-fifth of training participants
were women” (CRS 2015)

Cluster-level training looks like:



- The cluster approach appears to be an effective way of reaching women with information
- Proximity to homestead makes it easy for women to participate in multiple tasks in the family

Bangladesh agricultural extension projects provide:

Egiye Jai & Nijera Gori (2013 - 2016)

Production-oriented Ag. practices
focusing on vegetable garden, livestock,
poultry, and fisheries

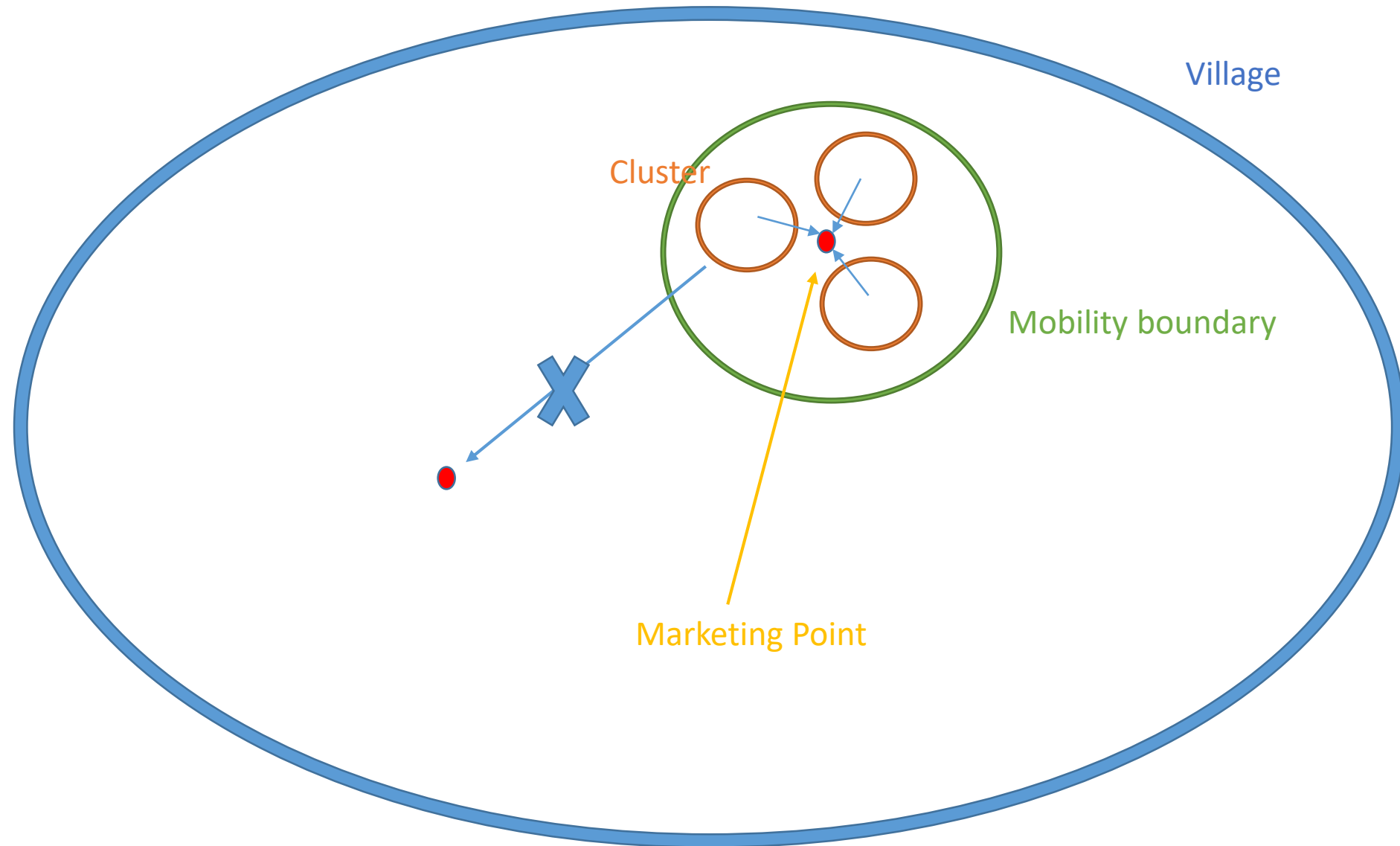
Cluster-level training

Linking farmers to markets via local
traders

Linking women farmers to markets

- In March 2016, the Nijera Gori project (Dinajpur district) implemented community marketing, linking small-scale women farmers to markets via local traders.
- The project first established a community marketing point, located in proximity to multiple clusters in the village, then brought a local trader to the marketing site twice a week to buy collected homestead food products.
- After community marketing, the traders could reduce transaction costs from obtaining stable supply of quality homestead products.
- However, the traders lost bargaining power over small-scale producers since a price was already determined under the project control.

Linking women farmers to markets



Marketing looks like:



Impact evaluation is based on a quasi-experimental design (using Marginal Mean Weighting through Stratification [MMWS] method)

Experimental Group

- Production-oriented Ag. extension services
- Linking farmers to markets
- 8 villages in Dinajpur district (500 households)

Comparison Group

- Production-oriented Ag. extension services
- 8 villages in Barisal district (500 households)

Control Group

- No Intervention
- 20 villages in Dinajpur and Barisal districts (1,000 households)

Summary of impact of production-oriented extension services and marketing #1

	Experimental Group		Comparison Group	
	Coefficient	dy/dx	Coefficient	dy/dx
<i>Income and Assets</i>				
Wealth	0.344*** (0.132)		0.316** (0.128)	
Monthly Income	1.161*** (0.180)	0.394	0.453** (0.186)	0.161
<i>Expenditure</i>				
Food	-0.078 (0.101)	-0.017	0.795*** (0.182)	0.241
Energy	-0.315 (0.222)	-0.094	-0.358 (0.229)	-0.107
Clothe	0.602*** (0.176)	0.130	0.738*** (0.218)	0.168
Healthcare	0.489*** (0.167)	0.126	0.633*** (0.202)	0.171
Education	0.676*** (0.151)	0.202	0.253** (0.119)	0.066
Transportation	1.293*** (0.272)	0.398	0.576** (0.230)	0.163

Summary of impact of production-oriented extension services and marketing #2

	Experimental Group		Comparison Group	
	Coefficient	dy/dx	Coefficient	dy/dx
<i>Farm Livelihood Strategy</i>				
Quantity Large Animals	1.208*** (0.251)		-0.844*** (0.280)	
Quantity Poultry	1.916 (1.179)		2.666 (2.391)	
Sale of Poultry	0.938*** (0.090)	0.271	0.374** (0.151)	0.086
Vegetable Production ^a	1.087*** (0.188)		1.176*** (0.314)	
Sale of Vegetable	0.471*** (0.136)	0.134	0.424*** (0.156)	0.119

Summary of impact of production-oriented extension services and marketing #3

	Experimental Group		Comparison Group	
	Coefficient	dy/dx	Coefficient	dy/dx
<i>Food Security and Dietary Diversity</i>				
HFIS	-2.644*** (0.808)		-1.349* (0.704)	
DDS	0.381*** (0.140)		1.108*** (0.197)	
<i>Women's Empowerment</i>				
Membership	1.331*** (0.105)		0.750*** (0.150)	
Own Large Animal	1.307*** (0.169)	0.333	-0.146 (0.203)	-0.018
Sale of Poultry Decision	0.826*** (0.119)	0.223	0.306** (0.138)	0.066
Sale of Vegetable Decision	0.778*** (0.142)	0.179	0.483*** (0.169)	0.097

Some implementation challenges

- Access to woman farmers
 - Having female extension workers
- Male farmers' participation in agricultural production training and community marketing
- Social Capital
 - Establishing trust between extension workers and farmers, farmers and traders, and farmers and farmers
- Voluntary participation in marketing
 - Sustainable supply of quality food (seasonal or regional shock or ecological system)
 - Long time for local traders and farmers to understand benefits from community marketing
- Communication between University and NGOs

Conclusion

- This evaluation provides empirical evidence of the impact of linking small-scale women farmers to markets and production-oriented extension services on the set of study outcome variables.
- Production extension services improved food security and dietary diversity.
- Marketing implementation, along with extension services, shared similar impacts, but led to a larger increase in marketing, human capital expenditure, and women's decisions over poultry and vegetables.
- Marketing implementation may provide small-scaled farmers the secured marketing outlets for enhanced homestead food production, positively associated with income and expenditure patterns, as well as intake of diverse nutrition.

Thank you