



# Robust approaches to resilience measurement, evaluation application, and focus on climate shocks

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# Resilience Measurement Approach

- TANGO measures resilience using changes over time in indicators of household well-being (e.g. food security) during the course of a shock.
- Simultaneously resilience capacities-the underlying factors enabling resilience-are also measured.
- These are grouped into three types-absorptive, adaptive and transformative capacities.
- Resilience capacities are seen as minimizing, moderating, or transforming the effects of shocks & stressors.
- The effectiveness of capacities is demonstrated through well-being dynamics.
- A mixed method approach is used using both quantitative and qualitative tools, panel data, and high frequency data collection that is shock responsive (Recurrent Monitoring surveys)

# PRIME Impact Recurrent Monitoring Survey 1 Deep Dive

## Which resilience capacities enabled households to recover from the drought?

- **Growth Regressions:**
  - Household and community resilience capacities predicting the change in food security outcomes over time.
  - Models controlled for shock exposure, initial food security levels, and household characteristics
- **Positive Deviant (PD) Analyses:**
  - Analyses of the groups of households that fared far better than average over the course of the drought waves.



# PRIME Impact Recurrent Monitoring Survey 1 Deep Dive

- **Programmatic areas of focus to increase households' resilience to future droughts**
- Timely humanitarian assistance (food aid, food/cash –for-work, hazard insurance)
- For enhancing household resilience, programming should focus on:
  - Building social capital
  - Supporting informal safety nets and community groups (especially civic groups and natural resource management groups)
  - Maintaining and enhancing households' asset bases
  - Ensuring access to savings and credit
  - Increasing access to communal natural resources.



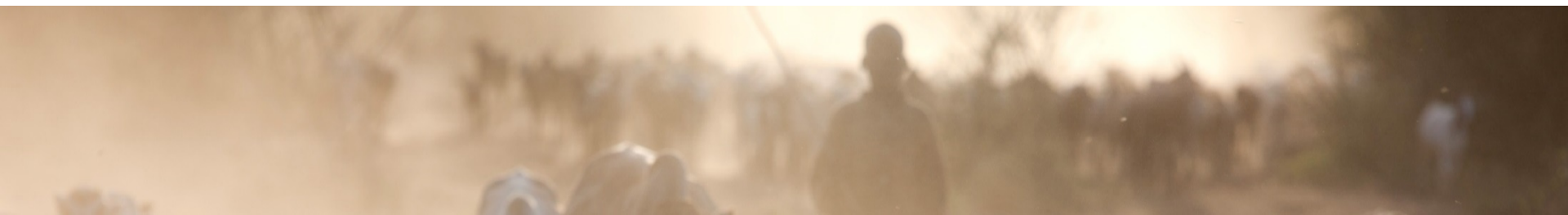
# PRIME Impact Recurrent Monitoring Survey II

- Data Collection for RMSII was conducted over a years time in 6 rounds (every 2 months) beginning in October 2015.
- This period was marked by highly erratic rainfall associate with El Nino and was considered the worst drought in 50 years. Shock exposure was measured using satellite rainfall data.
- The data collection allowed for real time monitoring of households ability to cope as well as analysis inferring whether or not PRIME project interventions had helped households better manage the drought.

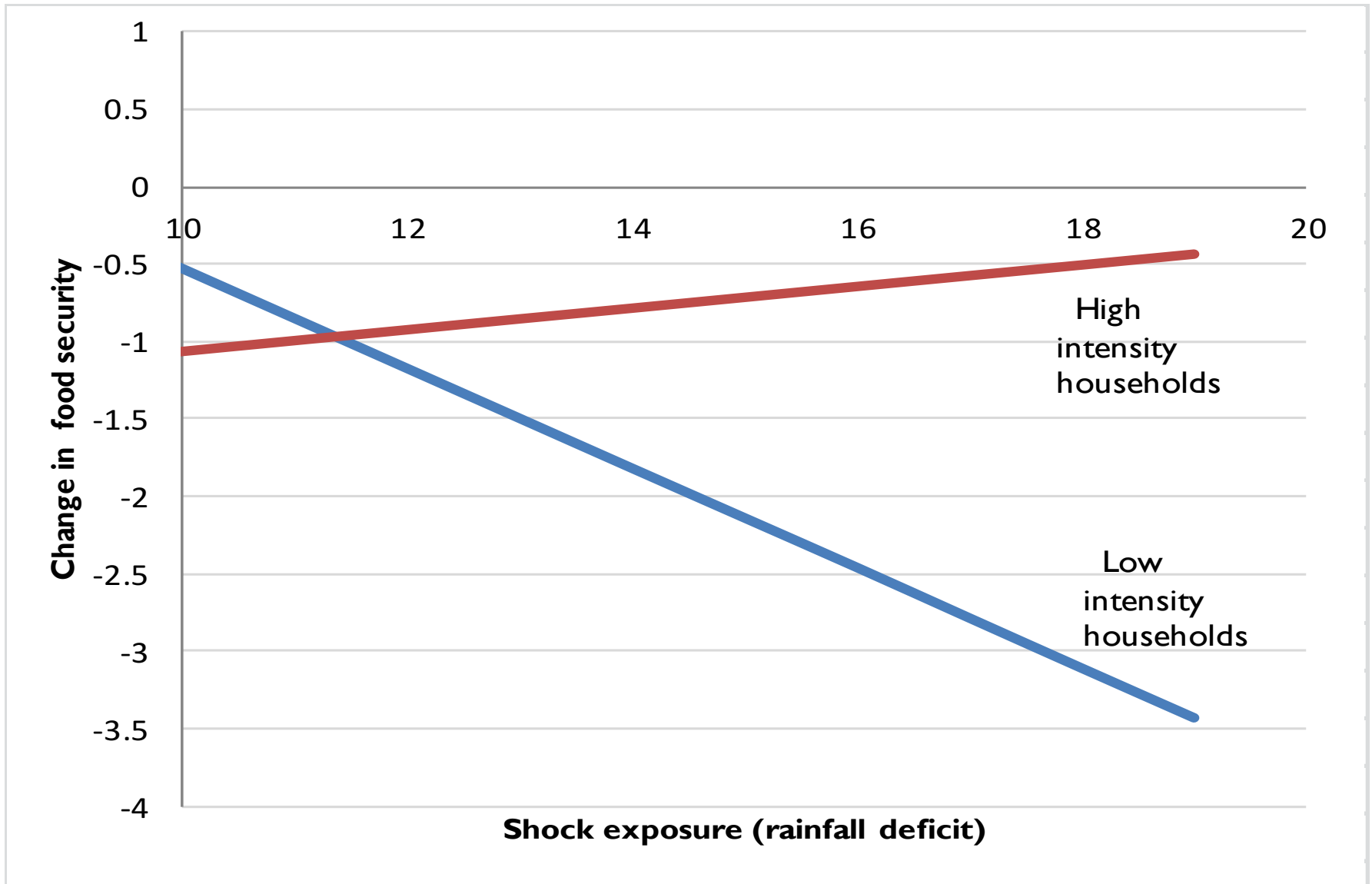


# PRIME Impact Recurrent Monitoring Survey II

- The data were collected from a random sample of 400 households from the baseline (panel data).
- 40% residing in project villages receiving comprehensive resilience programming and 60% of whom do not.
- The regression analysis controlled for factors that might have affected household food security other than exposure to PRIME interventions.
- The results indicate that there was a strong statistically significant difference in the relationship between shock exposure and food security between the treatment and control group.

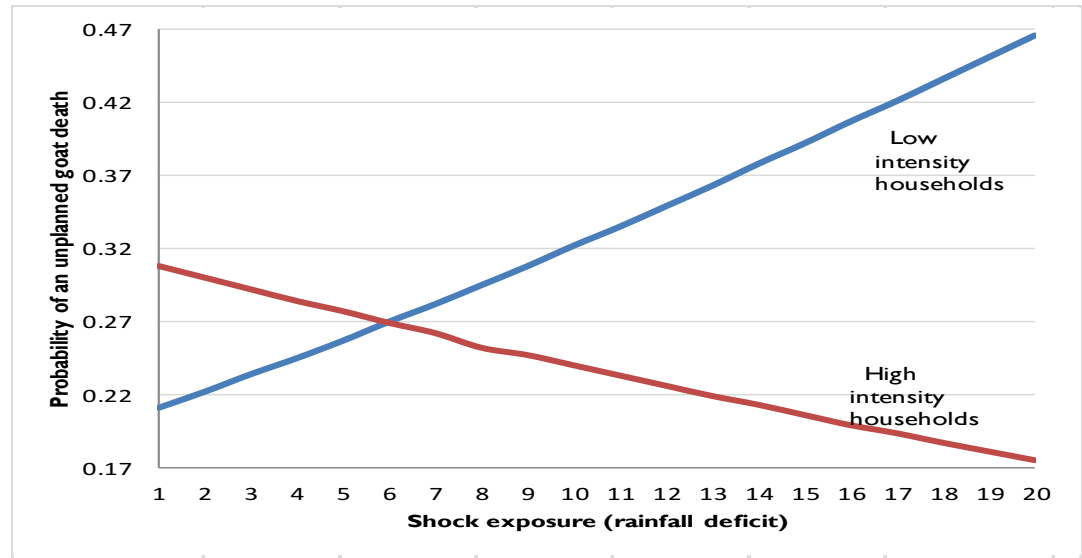
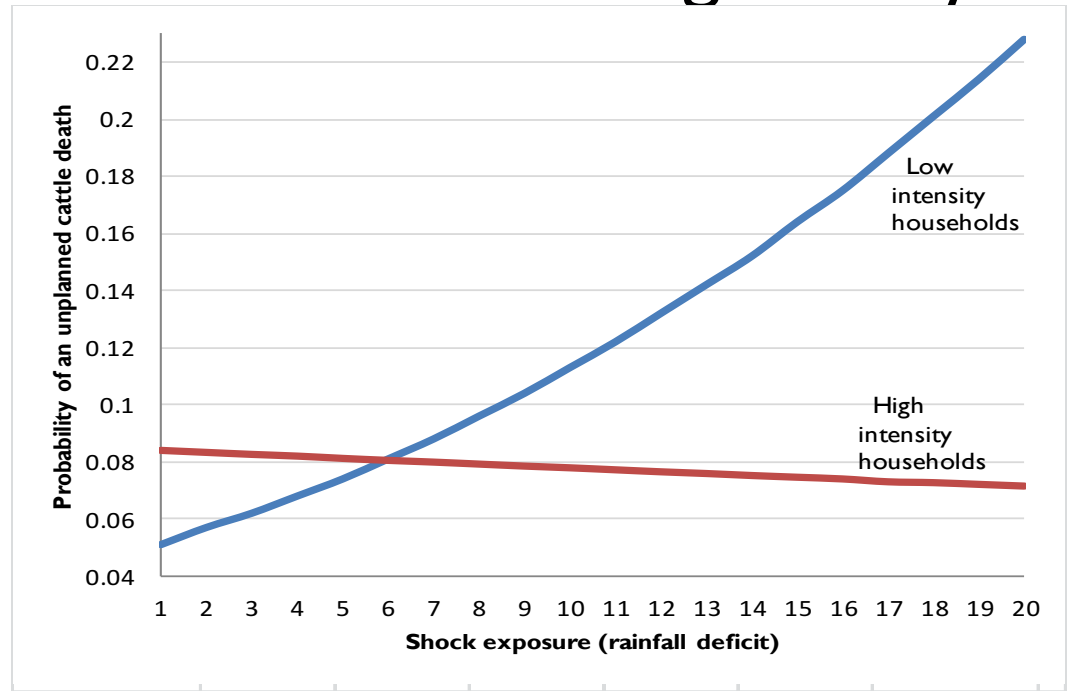


# Estimated recovery trajectory as shock exposure increases for low and high intensity households



# PRIME Impact Recurrent Monitoring Survey II

***Predicted probability of unplanned cattle, and goat deaths as shock exposure increases for low- and high-intensity PRIME project households***

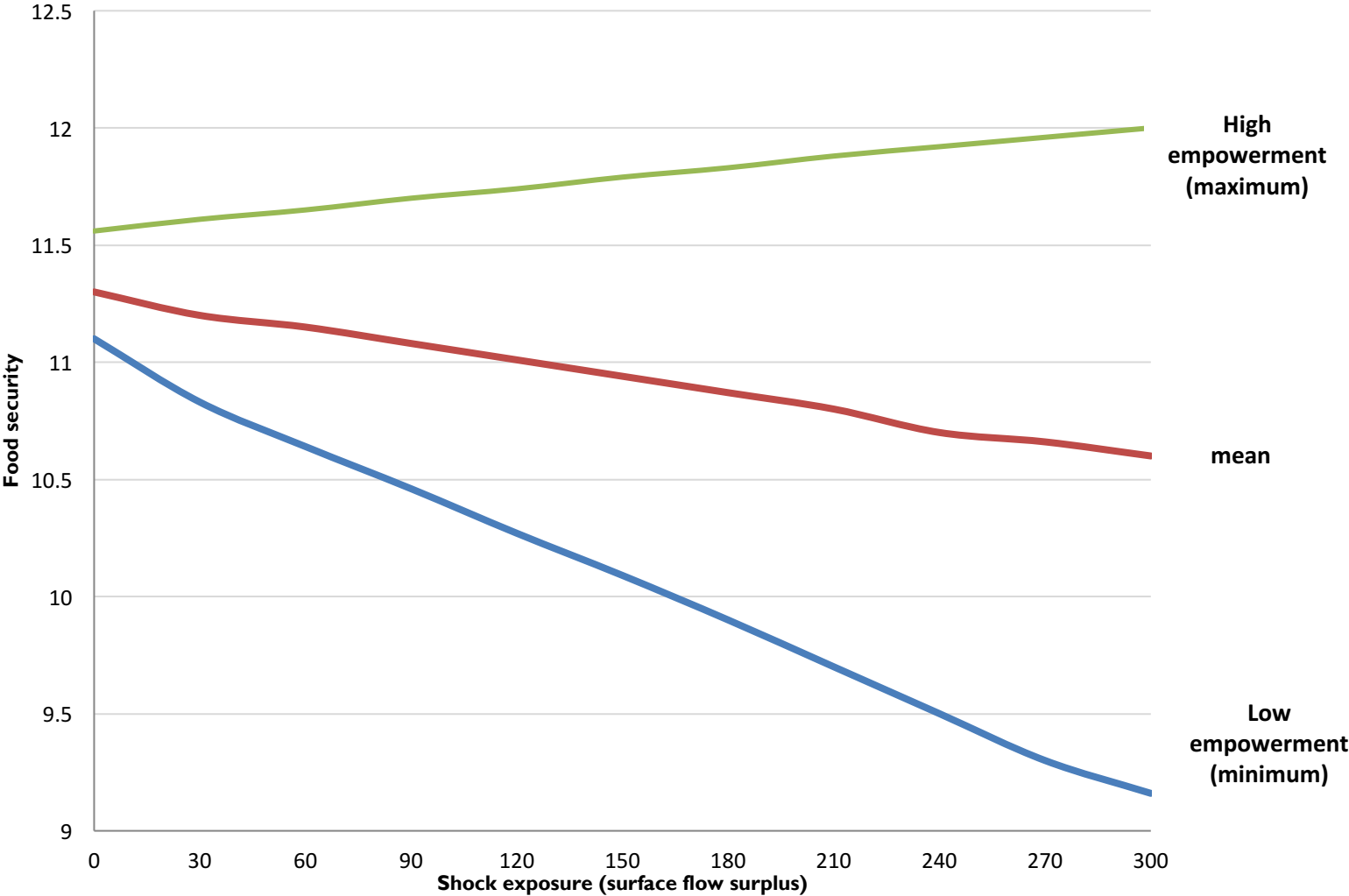




# The effect of women's empowerment in m shocks in Bangladesh

- **How women's empowerment is measured in the SHOUHARDO II project**
  - Women's empowerment is measured using three aspects of empowerment combined into an index using factor analysis: (1) women's decision making within their homes; (2) women's freedom of movement; and (3) the degree to which women hold non-patriarchal values.
- The figure in the next slide illustrates the cross-sectional regression results for the months of adequate food provisioning.
- At the highest level of women's empowerment as measured by our index, when flooding gets worse food security is maintained (green line)
- At the lowest level, when flooding gets worse food security drops (blue line).
- This shows that women's empowerment can buffer households' food security during climate shocks, thus bolstering their resilience to shocks.

# Estimated food security trajectory as shock exposure increases for women with high, medium and low empowerment





Thank You