

Climate Change, Adaptation, and Livelihoods in Rural Sri Lanka

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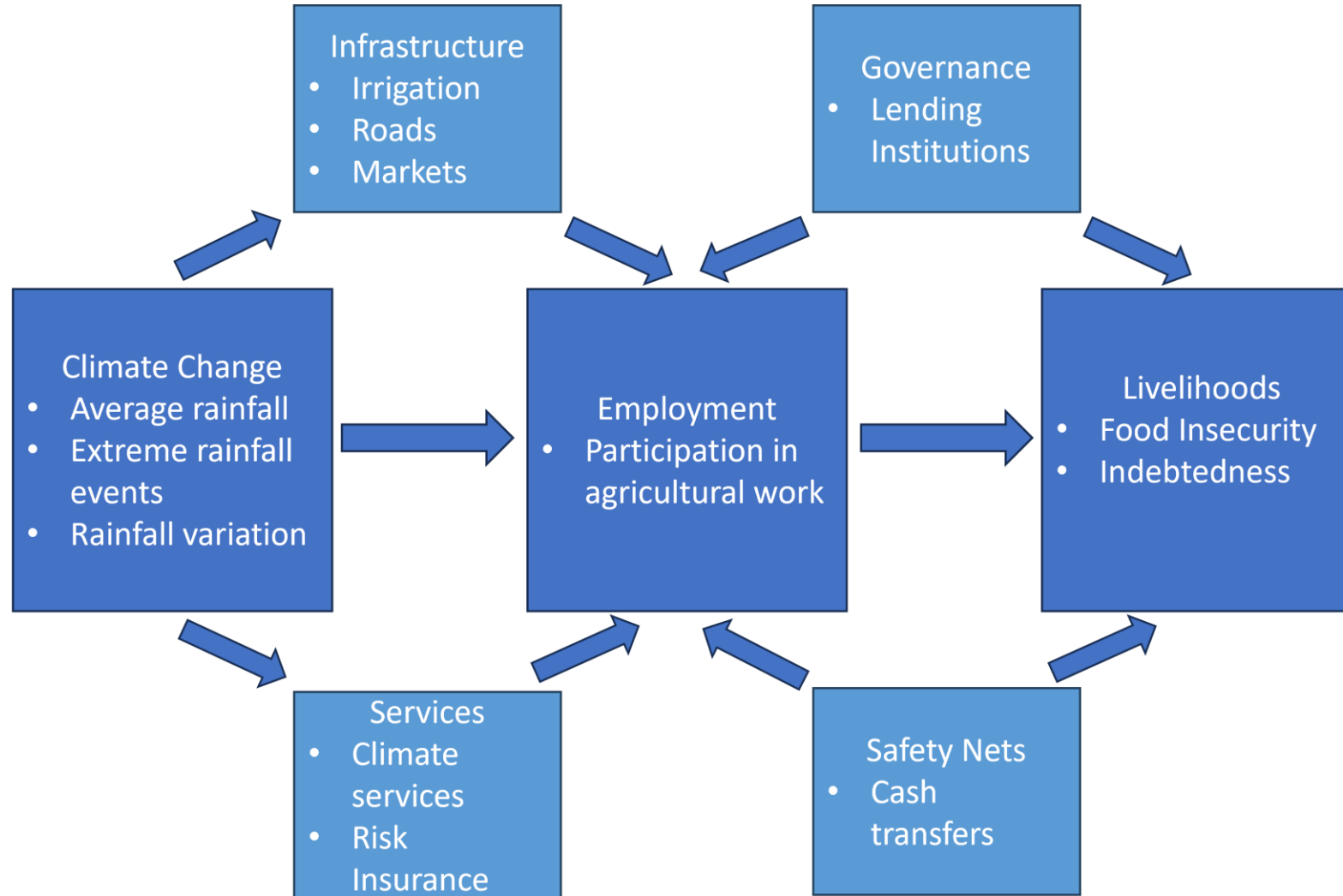
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Motivation

- Agriculture-related activities employ around 2 million people in Sri Lanka.
- Despite the gradual increase in temperatures over time, distribution and variability in precipitation do not have clear patterns or trends.
 - Intensity and frequency of extreme events have increased in recent years.
- Significant climate change impacts beyond the immediate income losses could negatively affect livelihoods in the absence of adaptation strategies.
- Objective: To analyze the impact of distribution and variability in precipitation on the livelihood and food security of rural households in Sri Lanka.

Framework



Methods

- Secondary Data:
 - Household data from the UNDP Multidimensional Vulnerabilities Index with over 19000 households, Rainfall and Institutional Data (ex: Irrigation facilities) at the District Secretariat administrative levels.
- We estimate the participation in self-employed agricultural work in response to rainfall variation.
- After controlling for employment decisions, we estimate the impact on household indebtedness and food security measures.

Results

- High current and historical rainfall is associated with high participation in agricultural work, except in extreme weather events.
 - High regional variability in rainfall is negatively affecting agricultural participation.
 - Gender effects are prominent, with women responding less to historical rainfall in their decision to participate in agricultural work.
- Agricultural households are more likely to be negatively affected in areas of food security and indebtedness.

Implications

- Exposure to historical extreme climate reduces climate vulnerability.
 - More information on climate adaptation practices employed by households could explain relevant channels.
- Gender effects show that female-led households and female workers could benefit more from information and adaptive measures to extreme weather events.
- The role of agricultural, financial, and social protection services are crucial in rural household's resiliency.

Moving Forward

- We wish to collect information on climate adaptation strategies employed by **households** at different stages of household decision-making:
 - Adaptation measures in employment and income diversification following the weather shock.
 - Adaptation in agricultural practices such as crop diversification.
 - Adaptation in food consumption patterns and borrowing measures due to weather shocks.
- Provide relevant policy recommendations in agricultural, financial, and social protection services to support the adaptation measures of households.

Thank you!