CUTS Project Brief

Food Security in India
The Interactions of Climate Change, Economics, Politics and Trade

Background & Context

Climate change threatens the food production systems and livelihoods of a significant proportion of the population in India. The potential impacts of climate change on agriculture are multi-faceted, directly influence productivity, yields, and the availability of arable land and water, as well as food prices and trade patterns for staple and high-value products alike. The potential effect on food security, where a number of Indian states already face shortages in production under current climatic conditions, is likely to be exacerbated by climate change, directly or indirectly.

Climate change threatens the food production systems and livelihoods of a significant proportion of the population in India.

The project is based on the premise that a broad but a concrete empirical approach is needed to understand the mechanisms of food security, i.e. an institutional approach addressing how various kinds of food production and distribution institutions operate and interact to produce a combination of entitlements that can ensure household food security.

The analysis under the project will take into account differences across states given that the huge diversity across states with respect to soil, water and climate variables as well as market based and public food distribution systems. The project, therefore, will be conducted from a state level perspective. It will involve methodological triangulation, including macro-modelling, a sociological study of the institutionalisation of food chains, field work in local communities using structured interviews, statistics, as well as text analyses of policy papers and other material on political processes.

Recognising the variation in food institutions across India, the project will focus on two states i.e. Bihar and Karnataka, which represent contrasting cases with regard to food production and distribution systems as well as household food security. Rice and potatoes are the two products selected to be studied in detail.

Objectives & Research Questions

To explore a model for analysing food security in India through the interactions of climate change, economics, politics and trade

Following questions will guide the project implementation:

- What are the effects of climate change on agricultural production in India?
- Will improvements in the value chain lead to a reduction of climate risk and enhanced food security for poor Indians?
- What are the combined effects of changes in food entitlements, including own production, market based provisioning and public support, on household food security?

A concrete empirical approach is needed to understand the mechanisms of food security.

There will be examination of possible shocks of future climate change on various regions of the country in respect to their vulnerability to climate change and types of interventions –

agricultural technologies, policy-driven interventions, or market-driven innovations, etc. Also, there will be analyses of market structures and arrangements linking the regulation of food prices, employment, and social security systems in various Indian states, thus linking the first two research questions.

Project Partners

- National Institute of Consumer Research (SIFO), Norway
- CUTS International, India
- Norwegian Institute of International Affairs (NUPI), Norway
- International Food Policy Research Institute (IFPRI), New Delhi

Methodology

- A macro-level analysis highlighting the potential vulnerable areas associated with climate change through models that link climate impacts with agricultural production zones – investigation of key vulnerable areas to climate change

Analyses of market structures and arrangements linking the regulation of food prices, employment, and social security systems in various Indian states

- A meso-level analysis of the economic geography of food trade, and how this might change under different scenarios; including 'inland' trade between Indian states as well as international trade – analyses of the role of agricultural marketing systems through a comparison of inter-state and state-level international trade movements and associated trade costs
- An assessment of the implications of changes in food politics, production and trade on local community and household food security and vulnerability – analyses of how food security policies, own

supplies and distribution systems together provide food entitlements and security at the household and local community level

Highlighting the potential vulnerable areas associated with climate change through models that link climate impacts with agricultural production zones

- An advocacy module that bridges the three above research themes to disseminate broader policy findings to a range of stakeholders and decision makers, sensitising them to the interface between climate change, agricultural production and distribution systems – dissemination of policy recommendations to policy-makers, civil society groups and relevant stakeholders – based on the research findings, policy briefs will be prepared for wider dissemination

Expected Outcomes

- Mapping of the vulnerability aspects of food security in respect to climate change, trade policy and distribution policy in India
- Availability of scientifically collected data on inland trade between Indian states as well as international trade in agricultural goods and associated trade costs of both formal and informal distribution systems
- Better understanding of the dynamics of selected agricultural value chains and the kind of improvements required in value chains – agricultural technologies, policy-driven interventions, or market-driven innovations that are needed to improve entitlements that can ensure household food security
- Better informed stakeholders such as parliamentarians, policy-makers, civil society organisations including consumer organisations, local representatives in the selected states, development partners, research institutions/academic experts