

Transitioning to Sustainability: Managing Institutional Change in SRI

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Transition to sustainable food systems is imperative with climate change and extreme weather patterns increasing the vulnerability of agriculture. In India, Green Revolution credited with helping India's food security, is now seen to have resulted in significant negative externalities that include biodiversity loss due to monocultures, and a systemic lock-in where continued use of agrochemical inputs has not only increased the ecological footprint of agriculture but comes at significant costs to the Indian government with the fossil fuel-based fertilizer import and subsidy bill reaching a record USD 27.2 billion in 2022-23.

The need to go beyond productivity and populist frames and transform agricultural systems towards sustainability has been highlighted by a network of scholars working on agrarian studies in India (Kumar et. al, 2020). Despite a plethora of emerging alternatives under the broad rubric of agroecology, sustainable transitions in Indian agriculture, we suggest, is caught between institutional inertia and lock-ins (Vanloqueren and Baret 2009) of its vast agricultural establishment. No national occupational group in the world contains more poor people, than India's agricultural sector. Moving beyond the post-independence pangs of production deficit, India today is a leader in agricultural commodities in the world in vegetables, buffalo meat, rice, wheat, and sugarcane. While crop yields have increased over time, farm incomes have stagnated or declined. Agriculture's contribution to GDP in India has fallen to around 14%, yet 50% of the workforce continues to partially rely on agriculture for their livelihoods. Rising input costs and stagnating output prices coupled with low yields make for low returns. Rural households in several Indian states experience negative growth in real net incomes. Productivity growth in field crops appears to have stagnated owing to a combination of poor soils, water constraints and unbalanced fertilizer use. The current crisis in Indian agriculture is often attributed to a historical policy that privileged self-sufficiency over sustainability (Kumar et al., 2020).

Any discussion on farming and agriculture in India is incomplete without reference to the longstanding

agricultural crisis and distress of farmers. The number of farmer suicides in India during 1995-2012 was more than 300,000 (Nagaraj et al., 2014). High dependence on external inputs—seeds, fertilizer, and irrigation water, coupled with increased indebtedness—has meant that Indian farmers are experiencing a loss of agency, “agricultural individualization,” and “knowledge dissonance” (Vasavi 2012), and deskilling (Stone 2007). The Indian farmer is vulnerable to game-changing trends that include increased costs, declining and fluctuating commodity prices, and high variability and unpredictability of weather (Prasad 2016).

This talk would focus on how this transition has occurred in the System of Rice Intensification (SRI) in India. It draws upon earlier research on the innovation history of SRI, the reluctance of the scientific establishment in building on the growing research on SRI in India despite the absence of any coordinated research program (Prasad, 2020), the need for building on the creative dissent of scientists who have dared to envision an alternative future, the importance of networks and innovation spaces in promoting alternative visions and the need to learn from alternate scaling models beyond the department of agriculture, such as the rural livelihood missions and the critical importance of building on farmers knowledge and their adaptive capacities in upscaling SRI (Prasad 2006, 2014, 2016, 2019, 2020). The paper argues that there is significant potential for overcoming technological lock-ins in policy if there is greater attention paid to institutional innovation and change.

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