TIGR²ESS
Transforming India's Green Revolution by Research and Empowerment for Sustainable food Supplies

3.6 Congruity of Crop Diversification and Dietary Diversity: Study of Akole Block in Maharashtra.

A study conducted by TIGR²ESS researchers from IIT Bombay offers insights into making agriculture more economically viable, accessible and diverse as well as increasing regional dietary diversity.

The research looked at four tribal communities in upland and lowland settings in Akole block, Maharashtra, the second most populated state in India. It compared socio-economic conditions, adoption of new technologies, dietary diversity and market access. A **School Nutrition Awareness Programme** analysed the socio-demographic background, anthropometry, diet and activity, eating behaviours of seventh grade students in the area studied.

Upland region: Hilly, densely forested with sparse population and low productivity, subsistence agriculture. Small land holdings. Multiple cropping requires intensive manual labour. Self-sufficient in food crops; rice, wheat and millets are staples. Agriculture is primarily rain fed and organic. Cattle farming is least developed. The area has poor transport, communication network and healthcare facilities.

Lowland region: 100% of the net sown area is irrigated. Crops are varied: pomegranate, onion, vegetables and flowers. Market trends dictate the cropping pattern and farmers use modern farm implements. Hence productivity is quite high. Dairy is a major subsidiary occupation. The area has good accessibility, infrastructure, healthcare, transport and communication networks.

School Nutrition Awareness Programme

The study found that information dissemination and overall income have an influence on dietary diversity. Child nutrition status is not clearly linked to general dietary diversity. State government should prioritise creation of FPOs, better water management, market and financial accessibility, credit affordability, and efficient pricing mechanisms. Such a holistic approach would offer vulnerable households opportunities to increase their income, improve their standard of living and reduce distress migration.

TIGR²ESS has given us an opportunity to identify the drivers of dietary diversity in a transitional agriculture scenario moving gradually from subsistence toward commercial production.

'Integrated and complementary actions and interventions are needed to tap the exhaustive knowledge of diverse and nutrient rich indigenous food sources to reduce the "triple burden" of malnutrition.'

Prof. K. Narayanan,
Lead Investigator, IIT Bombay

The challenges identified include:

- improving market access for upland farmers to improve their economic prosperity and nutrition; scaling local markets up to FPO would benefit villagers,
- tapping the potential of eco-tourism as an alternate source of income in the uplands,
- adopting an integrated approach of ground water resource development to improve agriculture in lowland villages and,
- educating parents, teachers, healthcare workers and children on the significance of a diversified diet to improve nutrition, whilst emphasizing the need for balance or proportion of foods as well as variety.

CALL	Growing Research Capacity
COUNTRY:	India
TITLE:	Transforming India's Green Revolution by Research and Empowerment for Sustainable food Supplies (TIGR²ESS)
GRANT NO:	BB/P027970/1
LEAD INVESTIGATOR	Prof. K. Narayanan
FUNDER:	UKRI GCRF

https://tigr2ess.globalfood.cam.ac.uk/

UNIVERSITY OF CAMBRIDGE
UK Research and Innovation
IIT BOMBAY