



ChAracterize, RevIve, Support, Monitor and MAnage (CARISMMA) sustainable food systems study – July 2024



The George Institute
for Global Health

Facts:

- India is home to 705 individual indigenous tribal communities, recognised as “Scheduled Tribes” (STs) by the Indian Constitution and constitute 8.6% of the country’s population.
- Indigenous communities are gradually shifting to modern, less diverse diets due to loss of local knowledge, climate and land-use changes and industrial agriculture, leading to environmental degradation, loss of biodiversity, and unhealthy consumption patterns which are further exacerbating their already fragile wellbeing.

Project Cycle:

2023 – 2028

Partners:

All India Institute of Medical Sciences, New Delhi

Rutgers University, New Jersey, USA

Indian Institute of Technology, Jodhpur

Indian Council of Agricultural Research-
Indian Agricultural Research Institute, New Delhi

Dr Shyama Prasad Mukherjee University,
Ranchi

Indian Institute of Public health-
Bhubaneswar

Columbia University, USA

Indian Institute of Technology-Bombay

Supporters:

DBT/Wellcome Trust India Alliance

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Background:

- Despite rich traditional ecological knowledge and access to biodiverse food systems, tribal communities have compromised nutritional status and sub-par quality of life.
- There is a lack of data relating to indigenous food systems and its drivers. Hence, a need exists to describe and identify specific attributes of these food systems and its drivers that offer sustainability while having the potential to make it resilient to changes in climate, socio-demographic and nutrition transitions.

Aims:

- To characterize, revive, support, monitor and manage sustainable food systems to address malnutrition in tribal communities of India.

Methods:

- Three tribal cohorts from different agro-climatic zones of India will be studied, namely Gond (Madhya Pradesh), Dongria-Khondh (Odisha) and Garo (Meghalaya).
- A mixed methods approach will be used during the prospective cohort phase to collect data from three tribal communities on food system, and its drivers, along with other health and nutritional indicators of women and children for 3.5 years.
- This data will then be utilised to develop customised sustainable food system solution by using artificial intelligence and machine learning.
- Parallely, a food systems intervention will also be co-developed and piloted in the previously studied Sauria Paharia community of Jharkhand.

Impact:

- The study will lead to the development of a comprehensive database with information on multiple exposures and their relative impact on the food systems and nutritional status of indigenous tribal communities from three different regions of India.
- Solutions for sustainable food systems will be shared with relevant authorities to explore the potential of incorporation in existing policies and programs.

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