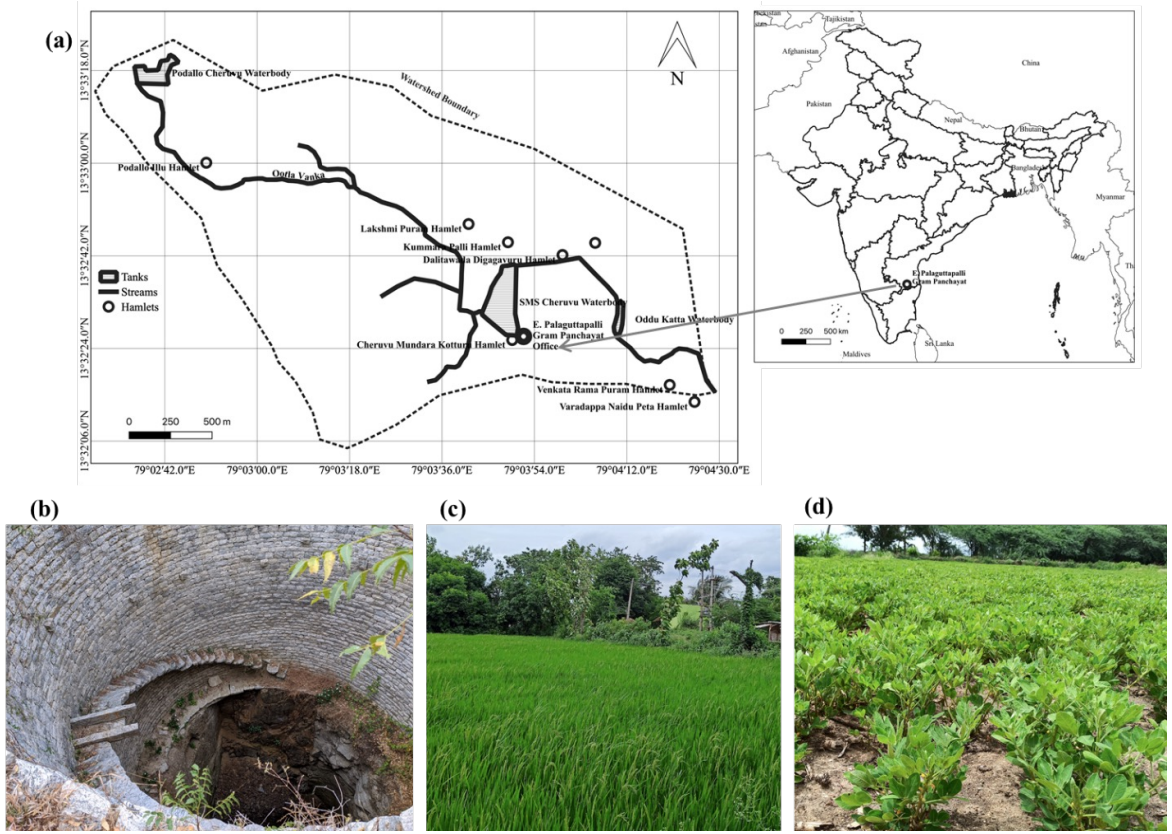
Name: Meghna Babbar-Sebens[1], Jenna Tilt[1], Meenu Ramadas[2], Nagesh Kolagani[3], Uma Shankari Naren[4]

Title: Framing a Decision Model for a Hyper-Localized Food, Energy, and Water Nexus in a Rural Community in India

Affiliation: [1]Oregon State University (USA), [2]Indian Institute of Technology Bhubaneshwar (India), [3]Centurion University of Technology Management (India), [4]E. Palaguttapalli Gram Panchayat

- Lack of environmental monitoring poses barriers to management for food-energy-water nexus in many communities across the world.
- Local and traditional knowledge of stakeholders in the community is key to **framing the decision problem** for adaptive management of these under-monitored hyper-localized FEW nexus in these communities.
- **Objective:** To use the **InterACTWEL participatory framing approach** for **co-production of a conceptual adaptive management model** for agricultural water systems in a hyper-localized FEW nexus system of a rural community – E. Palaguttapalli Gram Panchayat village in India

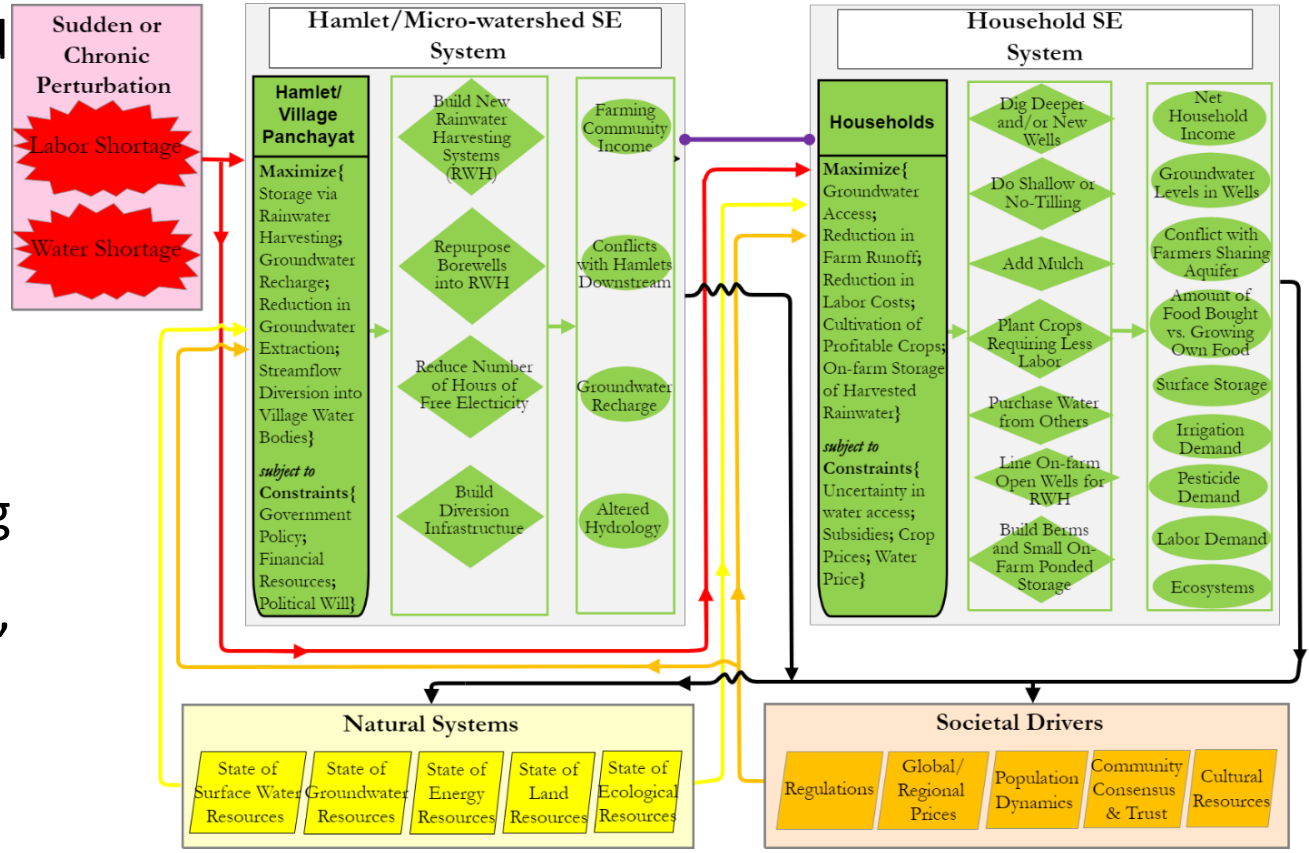


EngageINFEWS Research Coordination Network
NSF award # 1856059

National Coordinator
SPARC
Scheme for Promotion of Academic and Research Collaboration
SPARC/2018-2019/P1080/SL

Important lessons in stakeholder engagement

- With changing climate, local ecological knowledge built over decades could be disrupted
  - For example, knowledge of the rain cycles and what and when to plant that have guided farmers in the village for decades was found to be no longer reliable
- Flexibility in InterACTWEL model building process: Discovery of relevant stakeholders is an iterative process and takes time.
  - However, such discovery can also occur during the construction of the InterACTWEL model when new stakeholders (e.g., women farmers, farmers from lower castes, and farm day laborers) are identified for representation of missing knowledge.



EngageINFEWS Research Coordination Network
NSF award # 1856059