



Indigenous Farmers' Reflections on Livelihood Sustainability Under Monocropping, Mixed, and Hangadi Practices

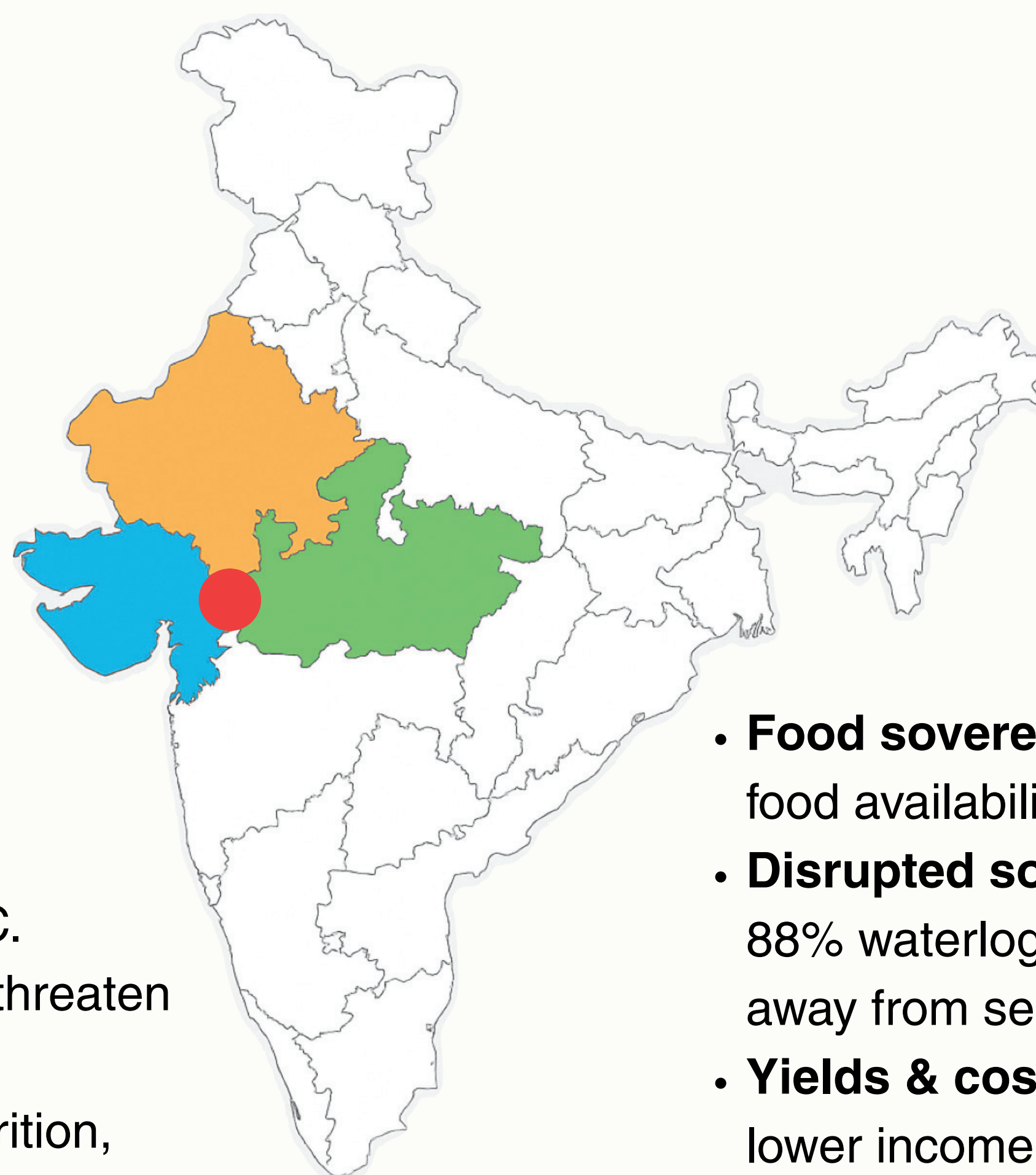


Jayesh Joshi, Deepak Sharma, Dr. Pramod Rokadia

VAAGDHARA, India

Context and Rationale

- **Region:** West Central India; >70% local small and marginal farmers.
- **Mixed Cropping:** Maize with pulses, oilseeds, paddy & cotton.
- **Crop Diversity:** Seasonal Vegetables & fruits on farms/boundaries.
- **Integrated Farming:** Land, water, forest, seed & livestock as an integrated system.
- **Why Mixed Cropping:** Small farms & erratic monsoons need diversification.
- **Climate:** 880 mm rain/42 rainy days; 11°C–46°C.
- **Climate Risks:** Delayed monsoons & droughts threaten yields.
- **Study Rationale:** Assess climate impact on nutrition, income & livelihood via farming patterns.



Key Findings

- **Climate Resilient:** Hangadi & mixed cropping as indigenous, self-reliant cropping systems, withstood erratic weather far better than monocropping.
- **Reclaiming self-determination:** Farmers are returning to millets cultivation, signaling a shift back toward community-controlled, sovereign farming.
- **Food sovereignty in action:** Diversified farmers had steadier food availability and lesser market dependence.
- **Disrupted sowing:** Heavy rains left 50–75% of land unsown, 88% waterlogged; hitting hardest where farming had shifted away from self-reliant systems.
- **Yields & costs hit:** 65% lower yields, 71% higher costs, 54% lower income — concentrated among soybean monocroppers, dependent on external inputs.

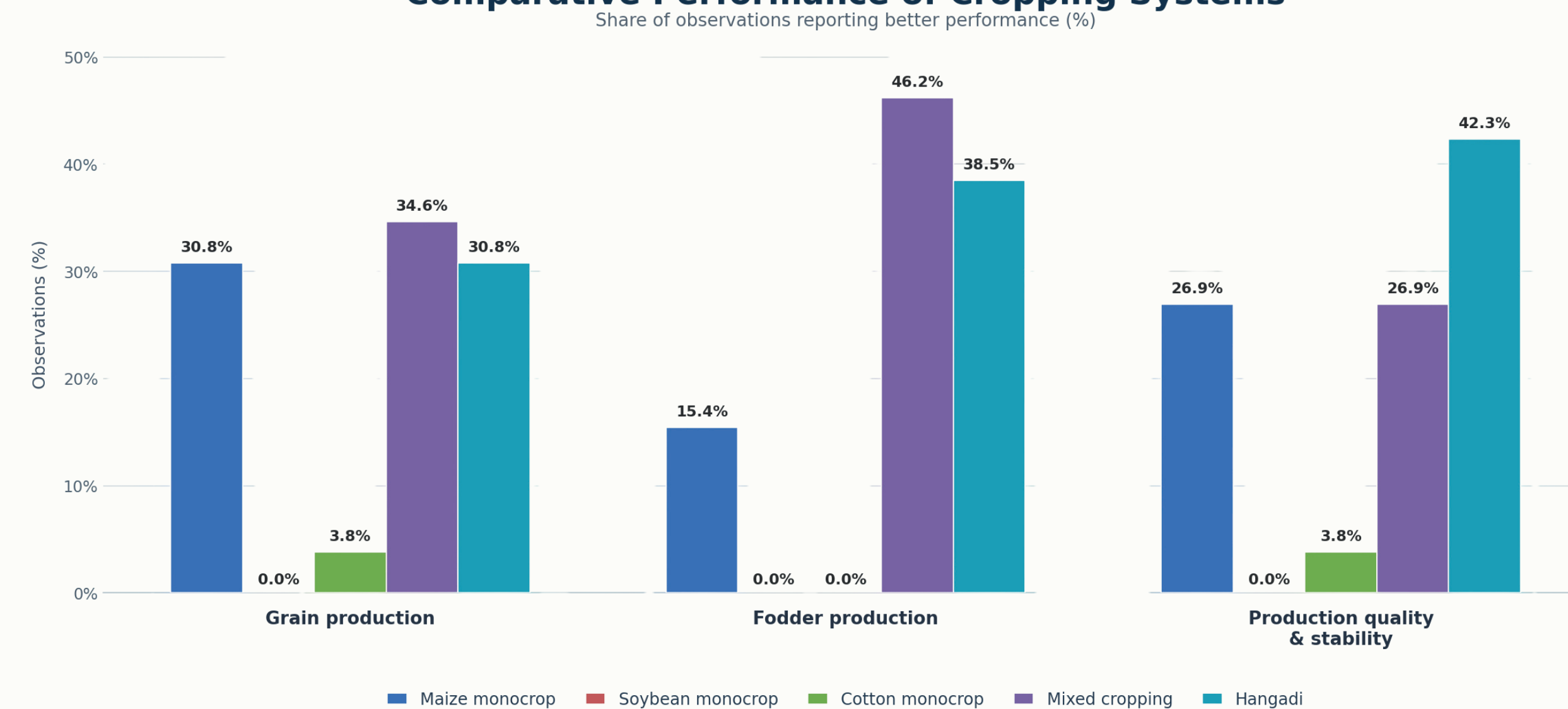
Study Objectives

- Capture local farmers' response to climate-induced weather variability in the area.
- Identify variations in crop performance across Monocropping, Mixed cropping, and indigenous Hangadi practice.
- Compare production quality and quantity of major crops across cropping patterns.

Methods

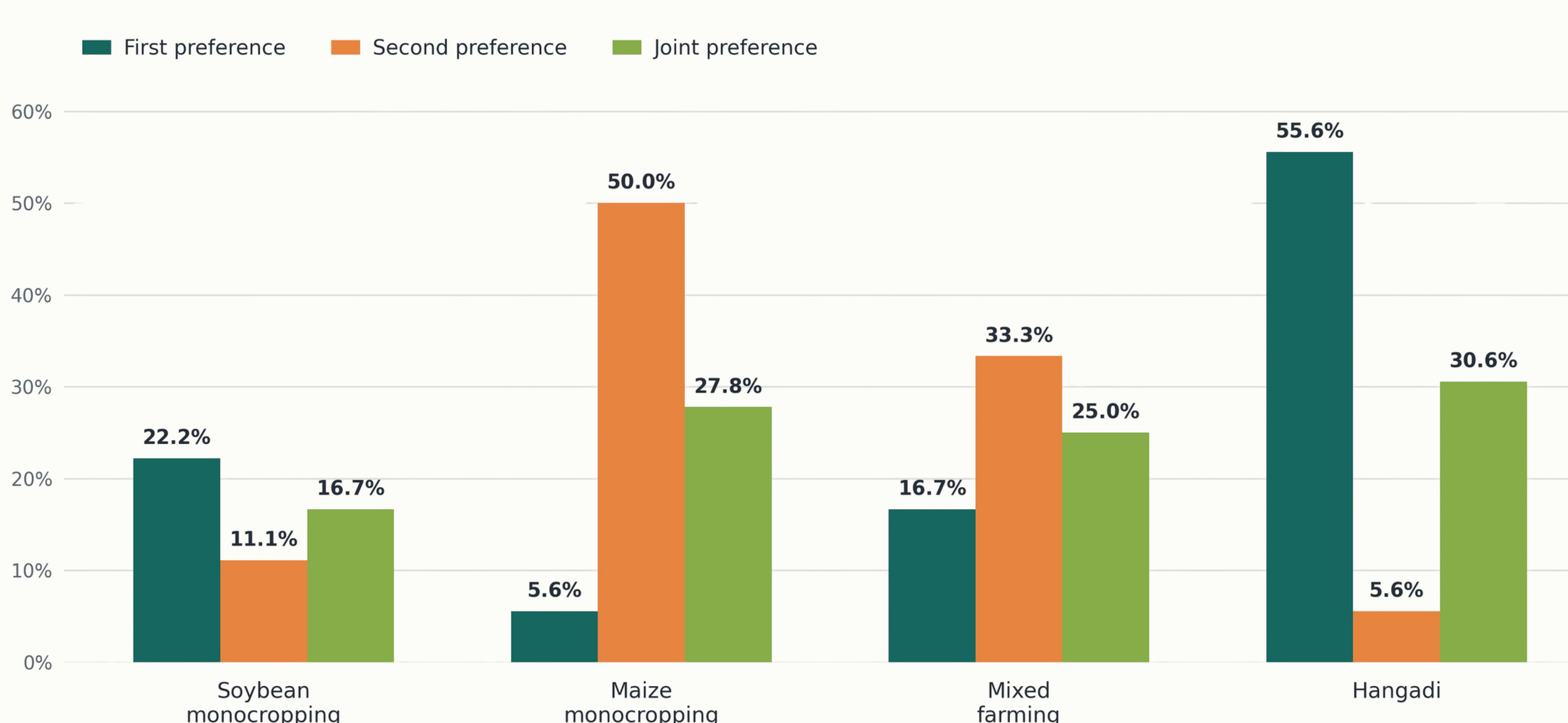
- **Study area:** Tribal tri-junction of Rajasthan, Gujarat & Madhya Pradesh.
- **Approach:** Participatory, agro-ecological research with support of community institutions.
- **Data collection:** FGDs with women led groups 'Saksham Samuh' in 26 villages.
- **Sample:** 626 small & marginal indigenous farmers having landholding <1 Ha.
- **Parameters:** Sowing, crop establishment, input cost, pest incidence, yield, food availability, market dependency.

Comparative Performance of Cropping Systems



Farmers' Preferences for Cropping Systems

Share of farmers selecting each system (%)



Hangadi Field of a Local Women Farmer

Conclusion

- Hangadi practice as cultural identity of community's sovereignty found more resilient and stable.
- Farmers shifting to Hangadi & mixed cropping for better food security & lower market dependence.
- Promote Farmer Field Schools for climate-resilient farming through farmer participation.
- Reduce single-crop dependence; explore integration of cash crops within Hangadi systems.

Contact Details

Head Office: VAAGDHARA, Village Post Kupda, Banswara (Raj.) India - 327001 Email: vaagdhara@gmail.com;

Phone: +919414082643

State Coordination Office: 37, Gautam Marg, Nirman Nagar, Jaipur (Rajasthan) - 302019



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