

Assessing impact of R4D initiatives employing Innovation Systems Perspectives: *Lessons from a Fodder Innovation Project*

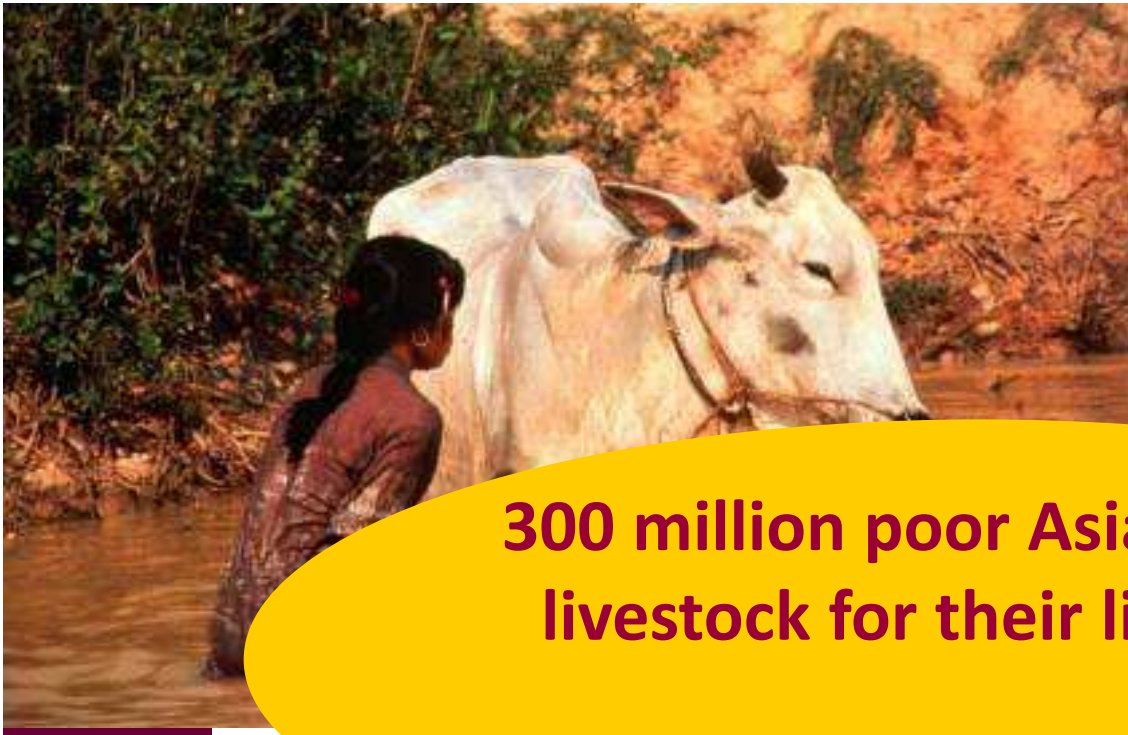
Ranjitha Puskur

7th ASAE Conference, Hanoi

14 October 2011

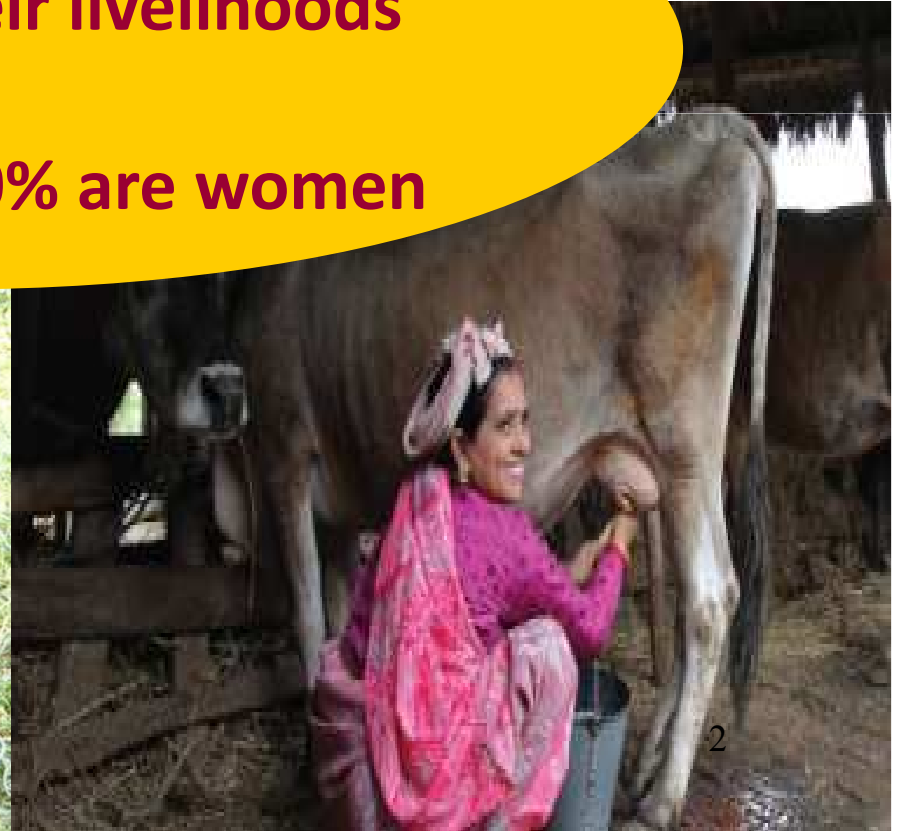


International Livestock Research Institute



**300 million poor Asians rely on
livestock for their livelihoods**

Of these, about 70% are women



Drivers of and Changes in Livestock systems

Climate change

Markets (food quality,
safety, super

Evolving challenges and opportunities

Huge implications for livestock dependent poor

And therefore, to R&D organizations

Econ
(Demand product

Emerging infectious
diseases

Population growth
Urbanization

Change in research paradigm

- New and increasingly complex agricultural development challenges – also new opportunities
- Need for research outputs to deliver development outcomes
- Ineffectiveness of linear technology transfer model
- Research/knowledge generation provides just one piece of the puzzle



Innovation – a social process

- *“a process where knowledge is created and used in new ways, in different contexts, to enhance the livelihoods of livestock-dependant poor”*
- occurs in a system mediated by the actors and their interactions, facilitated (or constrained) by institutions and policies



Features of new approaches for R4D

- It is about change or “innovation” as an outcome, not just about information, knowledge or technology as a product
- It places “research”, as one of the components contributing to the development process, rather than its pivotal point
- It focuses on processes and performance rather than just products (technologies, policies)



R4D initiatives – the new genre

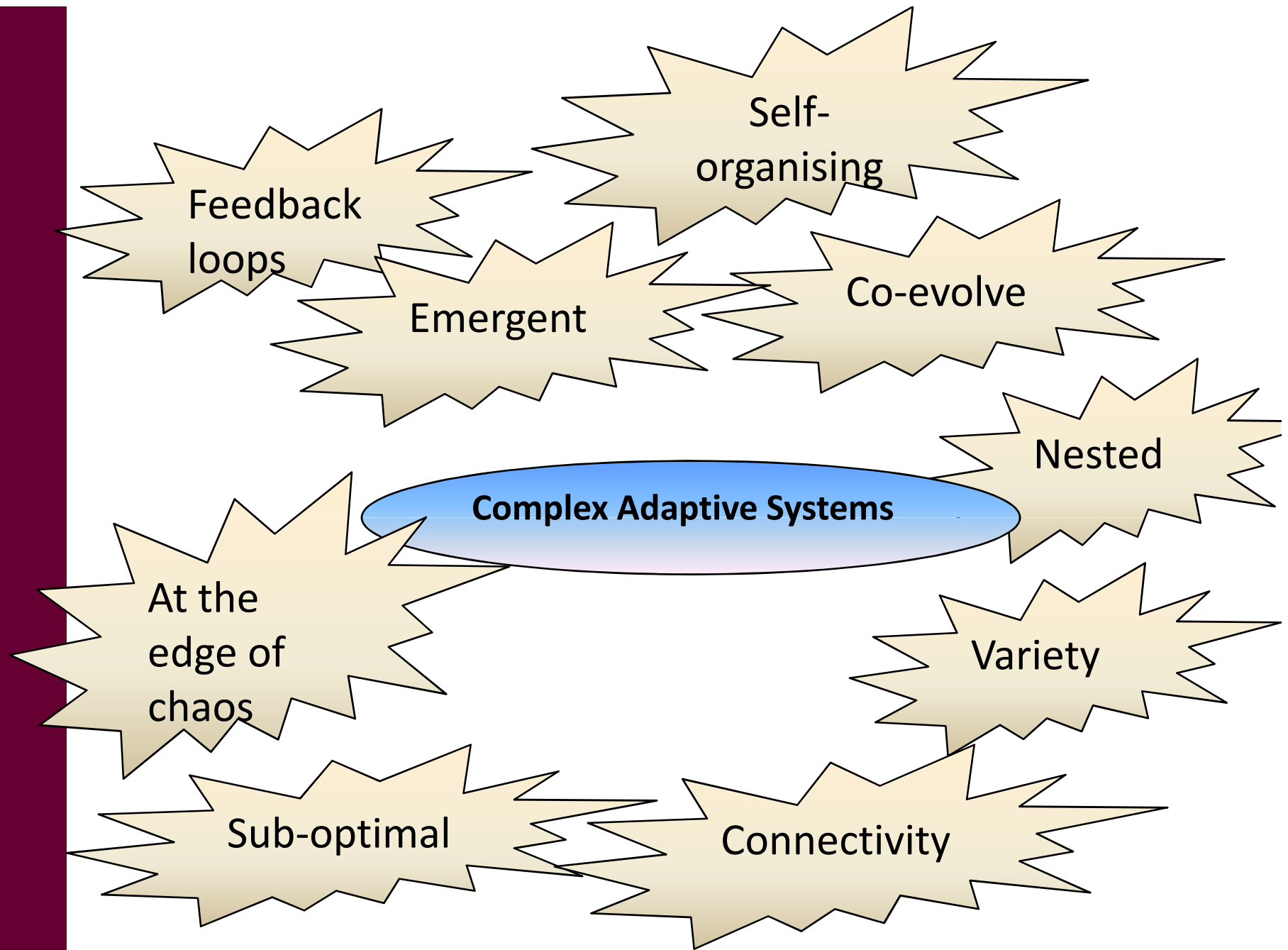
- designing and implementing active and prospective research to improve the current system
- not just to improve understanding of the livestock issues, but being able to influence actions
- address technical, institutional and policy changes in a systemic manner – *innovation systems*
- intervention logic evolves through learning by doing
- impact taking priority over mere knowledge generation



IS - Complex Adaptive Systems

- Evolutionary economics and bounded rationality
- Complex – dynamic networks of interactions and relationships
- Adaptive – individual and collective behaviour change as a result of experience





The Fodder Innovation Project

Challenge: Addressing feed scarcity in mixed crop-livestock systems to improve livelihoods of poor

Means: Building networks for enhancing innovation capacity of the system



Livestock systems diversity

Rainfall

Ikire

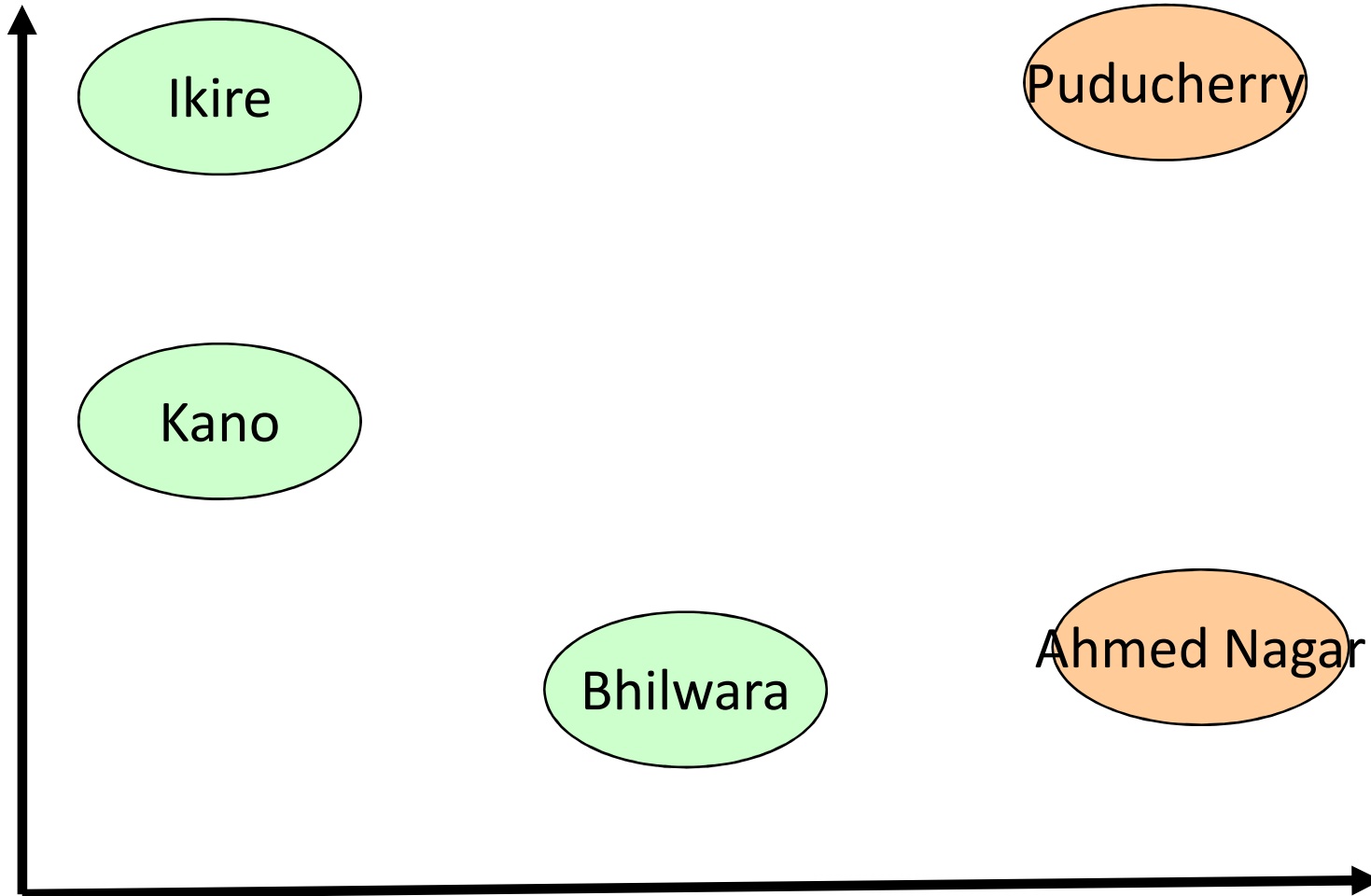
Puducherry

Kano

Bhilwara

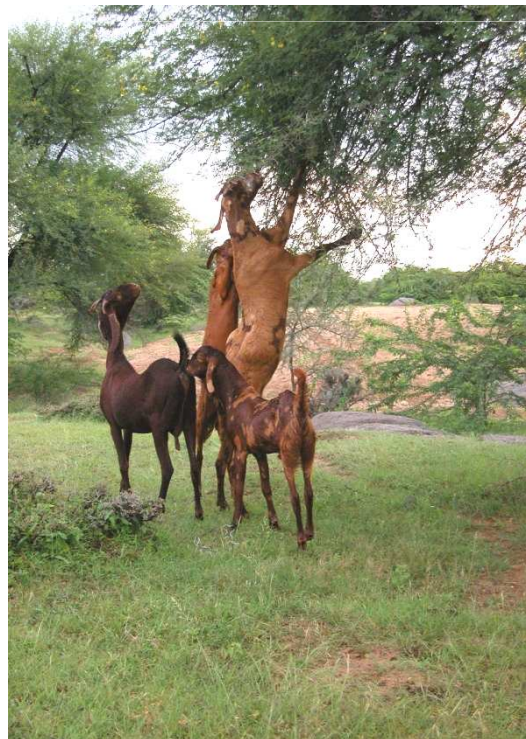
Ahmed Nagar

Livestock system intensification



Action Research Themes

- **Ahmednagar, Maharashtra, India** - An experiment in developing a mechanism to negotiate **improved fodder access in public** (wastelands and forest areas) and **private grazing areas** for poor livestock keepers.
- **Bhilwara, Rajasthan, India** - An experiment in developing a mechanism to coordinate complimentary technical (including fodder) and institutional support in order to **upgrade smallholder dairy systems**.
- **Puducherry, India** - An experiment in **establishing an integrated fodder production and marketing system** based on farmer fodder entrepreneurs.
- **Ikire, Osun State, Nigeria** - An experiment in connecting and coordinating existing systems (markets, religious / ethic groups, technical support, policy and traditional institutions) to facilitate the **transition from subsistence to commercial goat production**.
- **Dambatta, Makoda and Rogo, Kano state, Nigeria** - An experiment in connecting and coordinating existing systems (markets, religious / ethic groups, technical support, policy and traditional institutions) in order to **address seasonal fodder shortages in mixed crop livestock systems**



Interventions

Breed

Health

**Capacity
building**

**Community
organization**

**Institutional
arrangements**

**Access to
markets**

Feed

Interventions



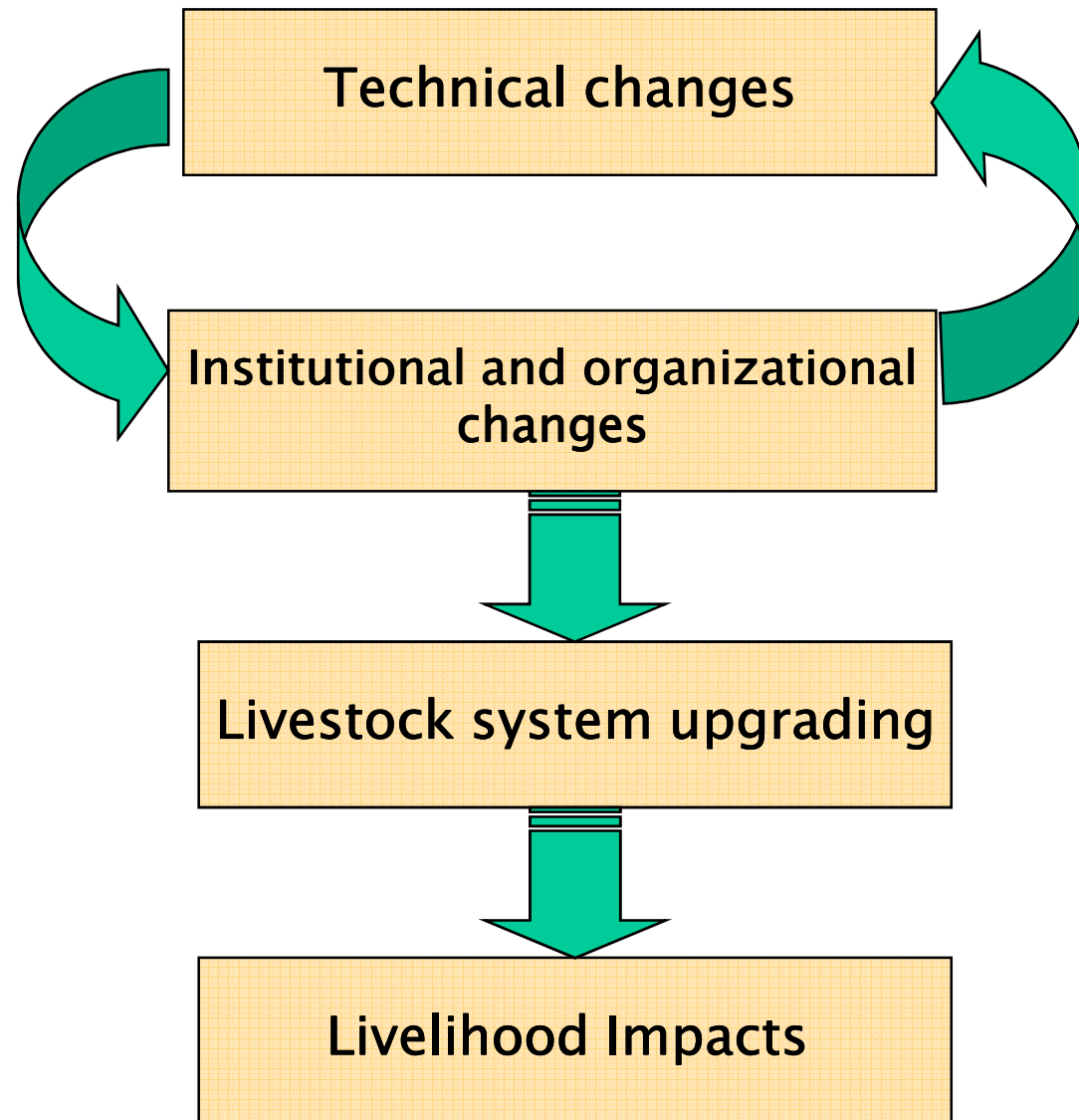
Entry point activities

Ahmednagar	Fodder production and use from forest areas
Bhilwara	Vaccination camps
Puducherry	Fodder production on private lands
Ikire	Linking goat farmers to markets
Dambatta	Accessing credit for input purchase
Rogo	Harmonizing extension services

Immediate outcomes

- Enhanced access to fodder
- Enhanced access to inputs and services
- Enhanced access to markets
- Enhanced capacities





Challenges in assessing impact

- Production + institutional impacts
- Cannot predict institutional and policy change
- Uncertainties associated with innovation
- Social change is emergent, non-linear and unpredictable
- Changes in behaviours, attitudes, knowledge, skills and practices influence impacts
- Impacts are geographically and socially dispersed
- Unanticipated and unintended outcomes/impacts



Challenges in assessing impact

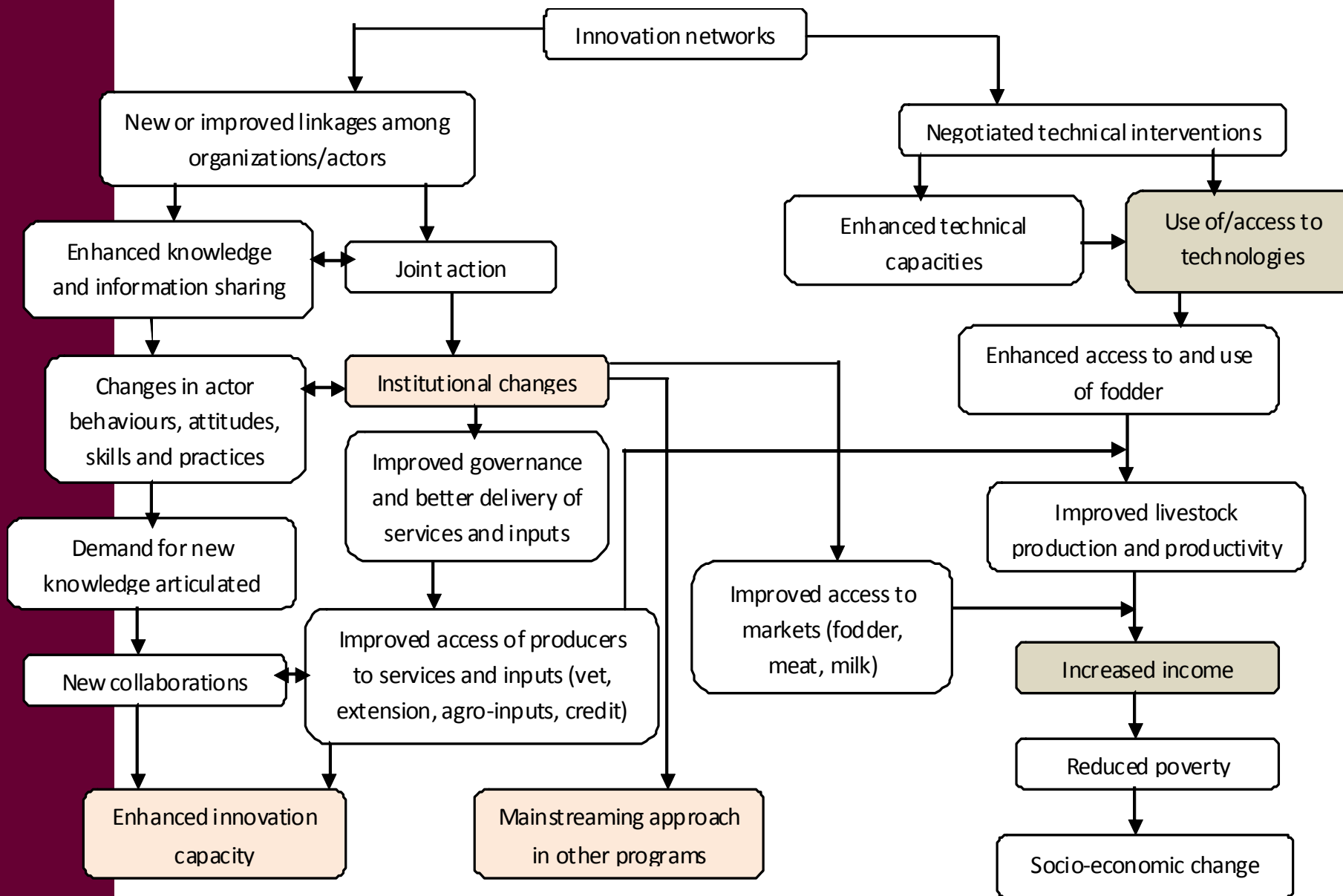
- Counterfactual?
 - With – Without Vs Before – After
 - Not sole attribution
- Understanding of processes or pathways influencing uptake of research products
- Changes in habits and attitudes
- Multiple impacts
 - poverty, social, process, policy



Moving forward..

urgent need for new methods and tools

- Theory Based Impact evaluation
 - Explain why, not just what
- Identify the causal chain - plausible causal relations
- Identify which range of factors could have influenced outcomes and impacts
- Analyse whether the project outputs have any effect on causal factors
- Different approaches needed for analysing different parts of the causal chain
- Analysis of attribution



Moving forward.. *urgent need for new methods and tools*

- Combinations of qualitative and quantitative indicators – processes, outcomes and impacts
- Mix of methods
- Account for the heterogeneity and context!



*ILRI is creating and integrating knowledge to
enable diverse partners to find innovative
solutions to make livestock a sustainable
pathway out of poverty*



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