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Research on agricultural innovation: why? and where next?

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The agricultural sector old and new

	Old era	**New era**
Development objectives	Food security	Livelihood impact and capacity development
Organisational focus of development	Mainly public agencies	Diversity of organisations
Farmer market links	Local	Global
Development context	Relatively stable and changing slowly	Highly dynamic, changing rapidly and in unpredictable ways
Sources of comparative advantage	Agro-climatic conditions/ the natural resource base/ location	Knowledge access and use
Analytical perspectives	Focus on constituent elements	Focus on systems and their dynamics

Innovation paradigms old and new

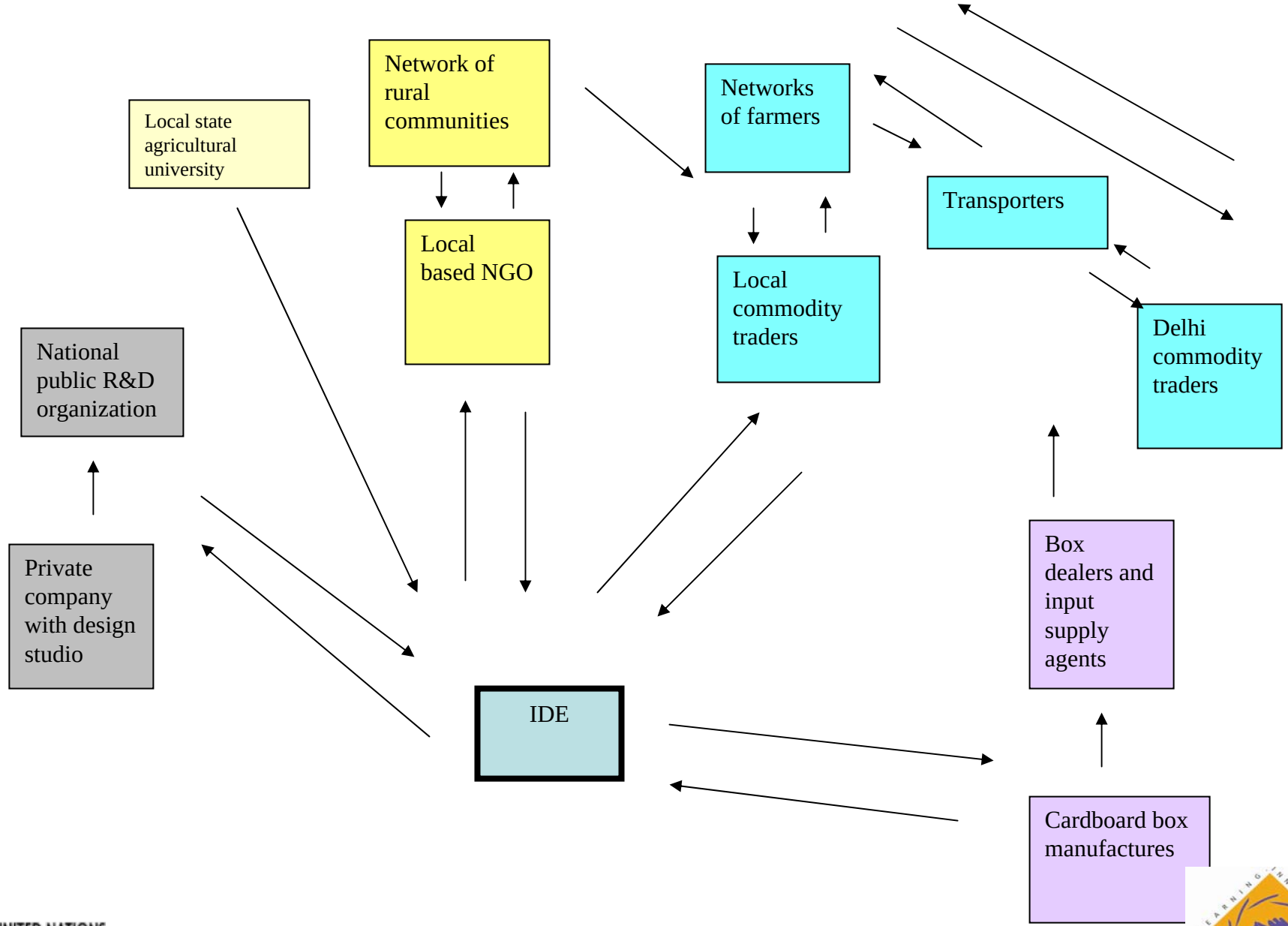
	Old	New
Paradigm	Technology transfer	Innovation systems / IAR4D / Social learning
Model of change	Supply through a pipeline	Interact and learn for innovation
Organisational focus	Research and technology transfer agencies (NARES)	Diversity of organisation in the public and private sectors/ research and non research
Core features of approach	Centres of scientific excellence	Partnerships, participation and networks
Driver	Supply push from research	Responsiveness to changing contexts
Intended outcome	Technology transfer and uptake	Impact and enhanced capacity to innovate
Theoretical roots	Neo-classical economics	Evolutionary economics, complex systems

Why are we all of a sudden interested in innovation

- Innovation: the process of creating and ***putting into use*** combinations of knowledge from different sources.
- Putting knowledge into use adds value to existing resources and creates **IMPACT.**
- Research creates knowledge and technology
- The process of innovation goes further and also includes putting that knowledge into use

How does innovation actually take place in the real world?

- Entrepreneurs and others identify an opportunity or a threat
- Form alliances to access new ideas, resources or markets and learn from each other.
- Reconfigure patterns of alliance when opportunities or threats change.
- A process **self organisation** of different players to access and put knowledge into use – organising for innovation
- Learning by doing helps build the capacity for self organisation.



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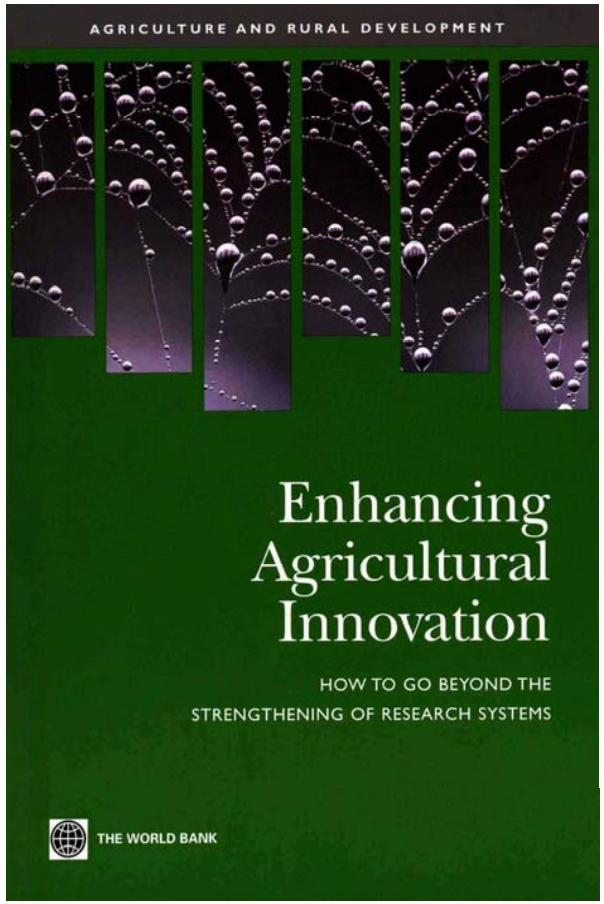
What prevents innovation in the real world

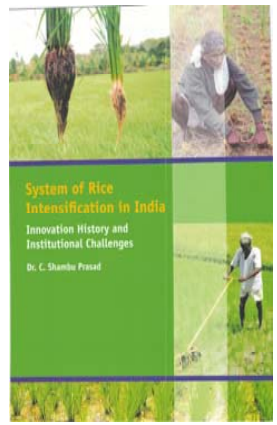
- High risks / weak incentives prevent self organisation.
- Incentives for self organisation exist, but ways of working and miss trust prevents self organisation.
- Limits to self organisation in highly dynamic contexts.
- Key players are missing or weak – i.e. the private sector.
- Key players are strong but isolated and isolation undermines relevance. i.e. R&D organisations.

Why is studying innovation important?

- Large investments in agricultural R&D have not lead to the level of innovation and impact expected.
- Need to revisit assumptions about how innovation takes place
- Helps relocate R&D in the architecture of linkages need for innovation
- Provides new generic design principles to help different players learn how to organise for innovation in different and dynamic situation.

Where has innovation research got to?





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LEARNING · INNOVATION · KNOWLEDGE
LINK

Where has innovation research got to.

- Developed conceptual frameworks – agricultural innovation systems
- Developed an empirically-based understanding of the innovation process – case studies.
- Identified innovation capacity as key policy intervention focus – rather than new research priorities and technology development
- Developed methodologies and typologies for diagnostic assessments
- Characterised strengths and weaknesses of innovation capacity.
- What next?

The next big thing in innovation studies

- Its **not** – the further intellectualisation of concepts
- **IT IS** -- operational questions about how to apply concepts like the innovation systems.
- This is by far the most difficult but exciting area of innovation research
- This is what the SSA CP with its IAR4D is tackling.

What are the big challenges

- How to embed research in self organising systems of innovation?
  - Responsive to changing needs
  - Delivering new technological opportunities

  Developing principles for reproducing the conditions that make innovation happen in any situation.
- Methodological challenges of investigating these in a rigorous way.

Can it be done?

- Yes but……
- Cut edge research at the interface of social and biophysical disciplines – not to be underestimated
- The Science Council