

The Role of Community-Based Learning for Technological Adoption

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*International workshop on
The Social Dimension of Adaptation to Climate Change
18-19 February 2010, Venice, Italy*

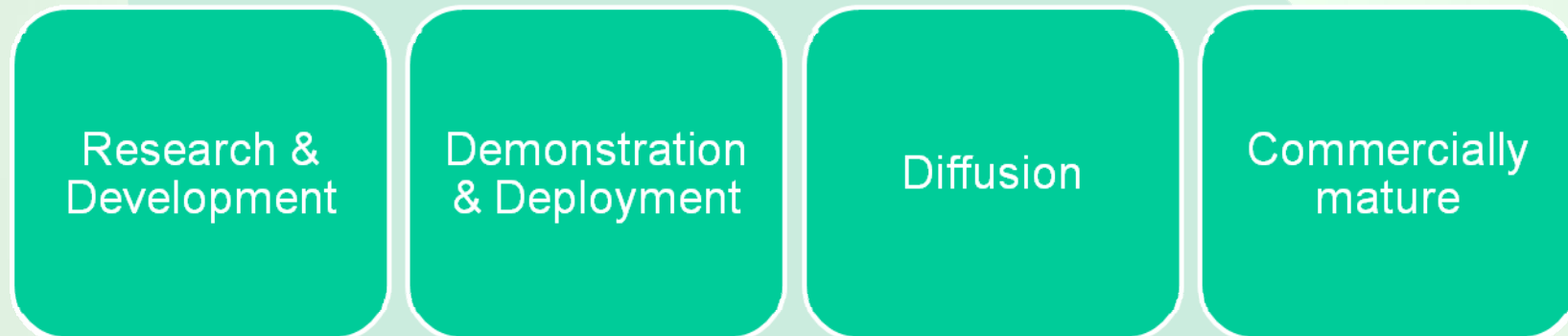
International Institute for Environment and Development

OUTLINE

- Technology under the UNFCCC
- Technology in national climate change planning
- Adopting technologies to Adapt
- The role of community based learning
- Way forward

Technology under the UNFCCC

The Innovation Process



Technology under national climate change planning

Planning processes

- Nationally Appropriate Mitigation Actions (NAMAs)
- National Adaptation Programmes of Action (NAPA's)
- Technology Needs Assessment (TNA)

Support mechanisms

- Promotion of R&D
 - IEA, CGIAR, CIFOR
- Demonstration & Deployment
 - GEF, CDM, JI, AF
- Diffusion
 - SCCF, LDCF, GEF Trust Fund, WB-CIF

Identifying Adaptation Priorities under the NAPA process

Options are top-down, impacts-focused and tend to be technical interventions.

Type of Intervention	Intervention
Institutional/Policy	<ol style="list-style-type: none"> 1. Providing drinking water to coastal communities to combat enhanced salinity Due to sea level rise (Bangladesh) 2. Mobilisation and integrated water resource management project (Cape Verde, Vanuatu) 3. Implementation and management of water management associations (Madagascar) 4. Contribution to better knowledge of surface water regimes (Mauritania) 5. Institutional strengthening of water resources sector (Sierra Leone)
Technical	<ol style="list-style-type: none"> 1. Rainwater Harvesting (Bhutan, Burundi, Mali, Sierra Leone) 2. Groundwater recharge for irrigation wells (Eritrea, Mauritania) 3. Use of spate, drip irrigation and range land development (Eritrea, Mauritania) 4. Stabilisation of river dynamics and water courses (Burundi, Mauritania, Mozambique) 5. Coastal Protection infrastructure (Maldives) 6. Increased water supply (2 Cambodia, 2 Comoros, Djibouti, Burkina Faso, Gambia, Guinea Bissau, Kiribati, Maldives, Mauritania, Niger, Samoa, São Tomé and Príncipe, Sierra Leone, Tanzania, Tuvalu) 7. Development and Improvement of small-scale and Community Irrigation Systems (Cambodia, Ethiopia, Guinea Bissau, Rwanda)
Market	<p>Water resource adaptation project (Kiribati)</p> <p>SOURCE: Nicol & Kaur (2008)</p>

Supply V Demand Outcomes

Ethiopia: Small Scale Irrigation

FINDINGS:

Most vulnerable rely on demand side coping strategies *not* supply side

Implications for Technology Adoption:

1. Involvement in design phase

Nepal: Biogas Stoves

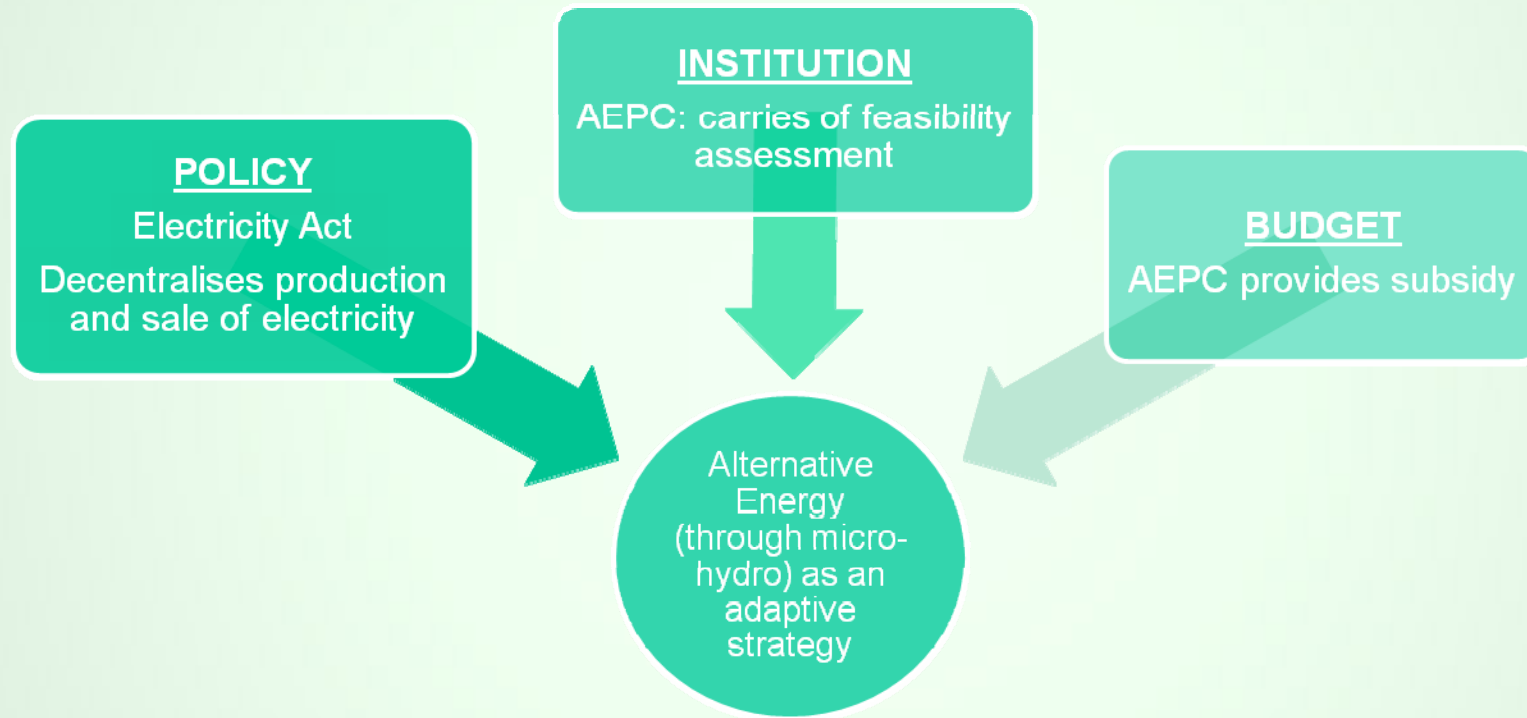
FINDINGS:

1. Limited access to most vulnerable due to lacking raw material;
2. Difficulty in up-scaling

Implications for Technology Adoption:

1. Involvement in design phase
2. Capacity building
3. Support for uptake

Cost Barriers: Nepal Micro-Hydro



GAPS:

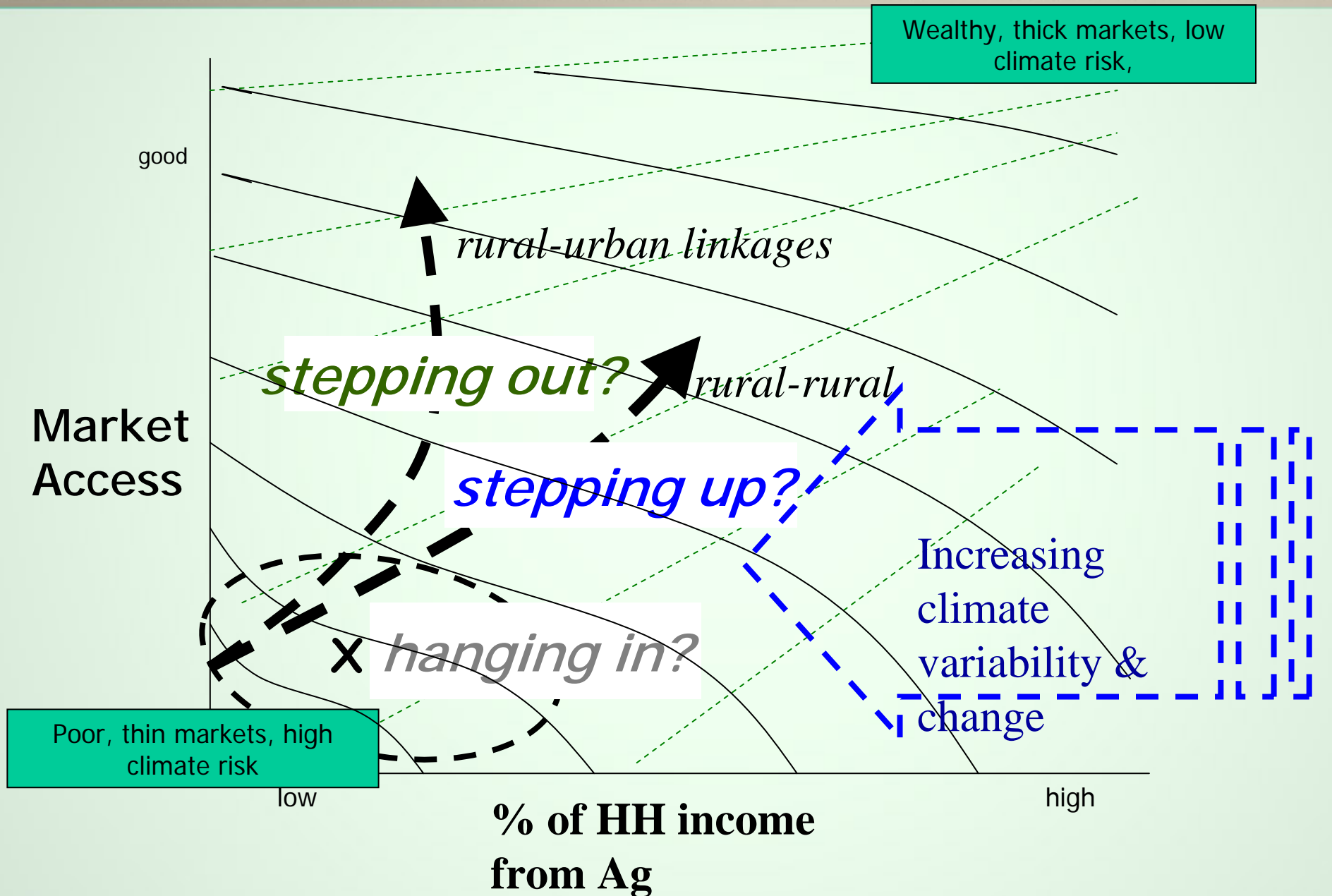
- 1. Financial Feasibility
- Development of market
- Transmission cost

Technology under national climate change planning



Barriers	R&D	Demonstration	Deployment	Diffusion	Commercially mature
Proof of concept	Light Green	White	White	White	White
Technological	Light Green	White	White	White	White
Scale	Dark Green	Dark Green	White	White	White
Cost	Light Green	Light Green	Light Green	White	White
Economic	Dark Green	Dark Green	Dark Green	Dark Green	White
Social	Light Green	Light Green	Light Green	Light Green	White
Institutional	Dark Green	Dark Green	Dark Green	Dark Green	White
Market failures & transaction cost	White	White	Light Green	Light Green	Light Green

Climate change and adaptive opportunities



Participatory & demand led technology development

- Hagmann

Supply side facilitating the demand side

- Farmer Innovation

'Synthesises extensionist-led v/s farmer-led approach'

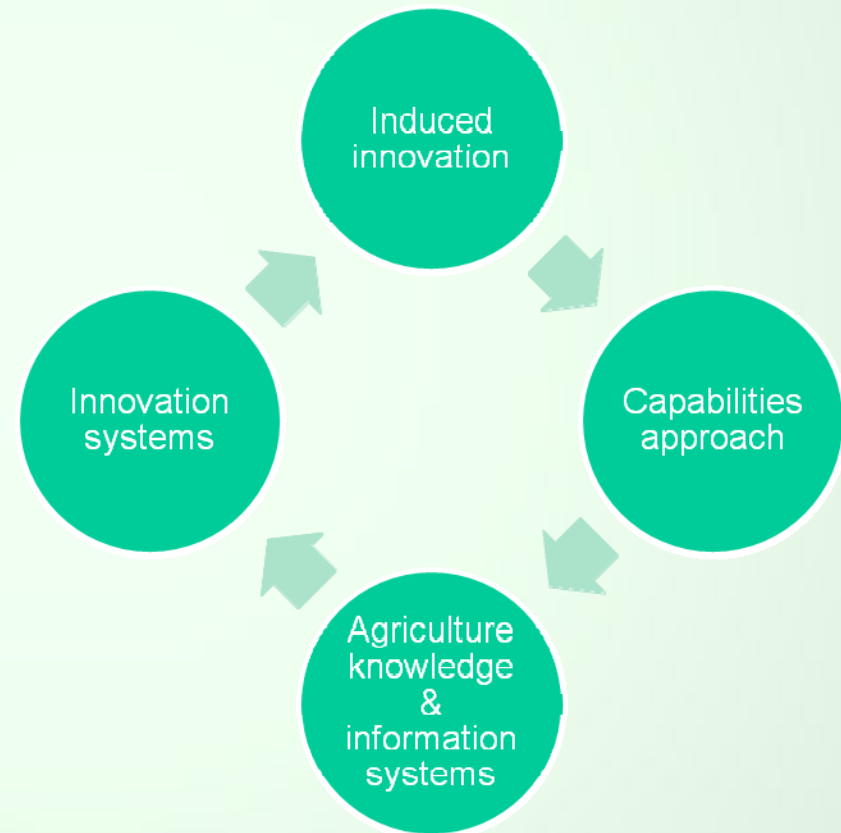
- Farmer First

Demand side; complexity; critique of TT; central role of farmer

- Integrated NRM

Same as FF + integration across scale and knowledge

Related approaches

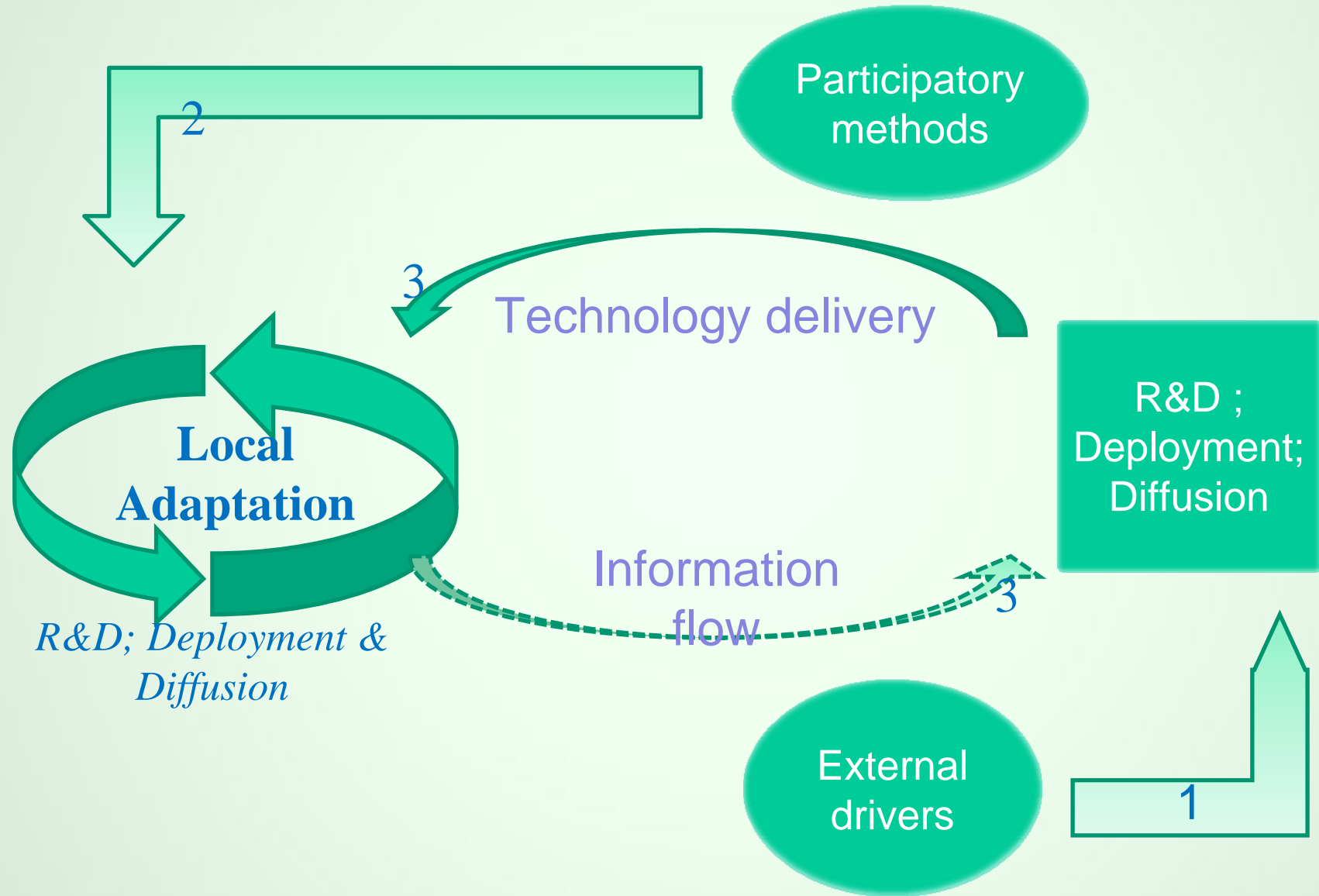


The Role of CBL for technological adoption



Innovation Process	Role of CBL
Research & Development 1.Relevance to demand 2.Technological feasibility or appropriateness 3.Timeliness	In-situ advantages 1. Participatory in design 2. Flexible hence timely
Demonstration & Deployment 1.Testing under proper conditions 2.Targeted demonstration for the demand side	In-situ advantages 1. Provides a vehicle for demonstration and deployment
Diffusion 1.Volume of demand 2.Supply capacity 3.Servicing 4.Knowledge transfer	CBL facilitates diffusion via regeneration/replication of local processes of R&D & Deployment

Routes for Technology Generation & Adoption



Thank you!

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