Farmer-managed irrigation systems and Aquaculture

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Project structure

• Participatory research project in Karnataka, India and Northwest province, Sri Lanka
• situation appraisal and first year of field trials
• linked to a project researching potential for aquaculture within engineer-managed irrigation systems
Identifying and defining poverty-linked research context

- Research context identified through
  - international need for multiple use of water resources
  - apparent separate development between fish production and irrigation systems
  - relevance of aquaculture in water-short areas (less wild fish)
Do people eat fish?

- Project focused on two important contexts
  - where supplies of fish and reliance on fish consumption is already high (Sri Lanka)
  - where supplies of fish and consumption is currently low (India)

- Can poor people realise benefits to their livelihoods through adopting suitable aquaculture?
Poverty elements

- marginal agricultural environments linked to lack of water
- limited access by the poor to the water that exists
- arid areas poorly serviced, especially minority groups
Knowledge

• little knowledge currently available of use to poor people
• most research outcomes appropriate for resource (including water)-rich
• poor capacity of responsible institutions
Strategies, partnerships and processes in research

• originally planned to work with local research and field-level implementers

• In Sri Lanka main partner is the Agribusiness Centre, part of the Faculty of Agriculture, Peradeniya University and CARE

• In Karnataka, Samuha a grass-roots NGO active in participatory watershed development
Processes

• main UK-based researcher spends time between working with partner institutions, backstopping from IOA

• in Sri Lanka
  - extended situation appraisal - complex, community-based, conflicts

• in India
  - household and small-group-based trials
Uptake, partnerships and institutional issues

• CARE using research outcomes more broadly
• Samuha-longer to ‘connect’-now incorporating into development process
Partners strengths

• ABC bring knowledge of rural entrepreneurship and ‘impartiality’
• CARE broader rural development agenda
• Samuha-grass roots, skills working with very poor groups
• IOA research methodologies, technical insights
Results

• Situation analysis clarified
  - operational requirements
  - strengths/weaknesses of research team
  - what not to do
  - target beneficiaries
  - research and development priorities
Sri Lanka

- social and physical complexity of watersheds
- linkages between farmer and engineer-managed systems
- importance of fish marketing in livelihoods of the poor
- danger of intervention causing conflicts
India

- range of tradition and modern irrigation structures evaluated
- testing of fish culture approaches by farmers
Outcomes

• improved physical human and social assets through interventions in community water bodies in SL
• strategic indicators to identify appropriate communities and avoid negative impacts
• low input-output fish production enhanced household assets in India
Constraints

• limited capacity of research team to work with poor people consistently (SL)
• limited local fishery resources (I)
Impact and assessment (1)

- partners attitude-positive
- SL-positive and negative impacts of target communities after increasing the value of aquatic products;
- second round building on successes with the same and new communities, detailed analysis of changes in livelihoods in progress
Impact and assessment(2)

• farmer-researchers-positive but livelihood gains appear modest
• re-orientated second year trials
• assessed through household level livelihood analysis, farmer feedback
• institutional changes among partners