Farmer-managed irrigation systems and Aquaculture

- Presentation to DFID, FGRP-3 and ARP Workshop on 'Practical Strategies For Poverty Targeted Research', Hanoi 7-11 th November 2000
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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 Agribusness 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 entrepreurship 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