

Action Research: The human dimension in learning how to improve fish seed quality

Angus MacNiven, Asian Institute of Technology, Bangkok

The AIT managed, DFID-funded project, *R7052: Improving freshwater fish seed supply and performance in smallholder aquaculture systems in Asia*, used a participatory action research (PAR) approach in its' final stage to look at seed production in Surin and Mahasarakam Provinces of Northeast Thailand. This approach has, broadly, three intended outcomes;

- (1) Action to improve a situation,
- (2) Research activities that will contribute to community/stakeholder knowledge and
- (3) Development of self-help competencies of participants.

This project was known amongst the collaborating partners by its (official) short title 'the fish seed quality in Asia project'. 'Quality' was the word that seemed to stick in peoples' minds; the perception was that we were ultimately going to be able to monitor and regulate some tangible aspect/s of a complex production and delivery system.

Following the first two collaborative research phases some funds remained for further research in the Northeast of Thailand, and at a later date programme development funds were made available to continue this work. It had become obvious that the instrumental approach to researching the problem was not satisfactory; a complex system cannot be fully understood by reducing it to its' constituent parts and emergent properties of systems, in this case the quality of fish seed, cannot be understood as a sum of those parts. Quality may better be seen as an outcome of all the decisions taken by different stakeholders in the system. The quality of fish seed produced can improve as the knowledge and understanding of the people in the production and supply system increases. The people in the system include not only the hatchery



Villages in Thailand planning research

operators but also the government officers, other service providers, traders and grow-out farmers.

The key to change was *learning*, and the contemporary view of learning processes is that people learn through actively adapting the knowledge that they have, in the light of what they experience through interacting with other people and the local environment. Thus agents who wish to bring about change need to recognise the processes that underpin learning and adopt a methodology to facilitate the development of *learning systems/communities*. Research has persistently shown that the traditional 'technology transfer' approach is not viable for effective, sustainable development though it remains entrenched. This has been recognised by the Thai Government Ministry of Agriculture and Co-operatives, as evidenced by the macro-level policy initiating a 'new paradigm' in district-level extension services. The plan for a 'one-stop' extension service is a move toward a more enlightened approach of facilitated learning. However this process is taking time to become active on the ground as there are still major issues in organizational capacity that require clarification and development. The

complex issues associated with most problems involving people and/or natural resources cannot readily be compartmentalised, unfortunately the culture of bureaucracy in government service, with its' formal rules and procedures mean that all too often these issues are consigned to administrative 'boxes'. This leads to situations where responsibility is not clear and thus issues can be ignored or the focus is on a particular aspect of a problem without regard for the consequences which can include mistrust, lack of confidence, frustration, conflict and stress in both private and public sector actors.

The methodology we adopted provides one example of an appropriate way of working for change agents/field-level facilitators that is (a) responsive to the needs of rural communities, (b) enables community members to systematically investigate their problems and issues and (c) to produce plans leading to action, learning and innovation. Community in this sense means people with common interests living in the same area. Most of the work carried out by the project was at the village community level though, during the action phase there was considerable interaction with organizations at sub-



Prioritising issue

district, district and provincial levels. The methodology can also be applied to any other complex issues, either specific problems or generally in project planning implementation and evaluation and all aspects of organizational development.

Our process can be broken down into 6 stages which, apart from the initial entry, should form part of a learning cycle that can continue indefinitely. Central to this process is the systematic use of participatory tools for appraisal, analysis, planning, monitoring and evaluation.

1. Entry to the community and establish agreement to work together.
2. Identification of local knowledge and information system
3. Participatory determination, prioritization and analysis of issues
4. Action planning to address issues
5. Action
6. Review results of the action and plan the next stage/cycle

An important point in understanding learning processes is that people will learn what they perceive to be useful and important and often this is different from

what the 'experts' feel is useful and important. This difference in the framing of issues certainly occurred in the research that we undertook to improve seed production in the region. Most hatchery operators and grow-out farmers maintained that 'quality' was not a problem. Ultimately our approach was to tell hatchery operators in Thailand that we were researching ways to improve seed production and delivery, and invited them to collaborate with the project.

The most important issues raised by farmers were socio-economic factors; specifically related to financial matters and the market. Analysis reveals that the issues do not exist in isolation; they are part of the complex system of events and conditions of life in the household, community or region including the production system, technical knowledge issues, resource access issues (including knowledge), markets, value systems and service provision. The facilitated discussion around this analysis will confirm that ready-made, quick solutions rarely work and what is usually required are multiple strategies to deal with the many related issues in a holistic manner. The outputs from the

analysis are then used to plan the actions; this means identifying aims and objectives and defining the tasks to try and achieve the objectives. For example the issue 'Cash flow' can be restated as a goal: 'to improve cash flow'. Some related factors from the analysis of the cash flow issue were 'low sales volume', 'high cost of inputs', 'fish die' and 'few customers'. These can be restated as objectives: 'to increase sales volume', 'to reduce cost of inputs', 'to reduce fish mortalities' and 'increase customers'.

The facilitators continued to support the participants through encouragement and practical support in logistical aspects of the activities such as making the initial contact with government offices and hiring minibuses.

Upon completion of activities review workshops were held, where participants who had taken action reported back to other members of the community for open discussion. At this stage we would also review the plan in the light of the output from activities in order to plan what should be the next step.



Fish seed transportation