

Evaluation of the MRAG/RDC Adaptive Learning Approach

to
Small Waterbody Enhancements in Lao PDR
1999-2002



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June 2002

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1 Introduction

This report provides an evaluation methodology, and then evaluates, an adaptive learning approach to resource management. Its principle means of doing so is by evaluating the outcomes of a process of adaptive learning that was implemented in Lao PDR to reduce uncertainties relating to small waterbody management and enhancement. The actual experimental results resulting from implementation can be found in Arthur *et al* (2002). They are described here only as much as is needed to provide an evaluation of the process and its outcomes.

Implementation of this process was part of the Adaptive Learning in Fisheries Enhancements project (R7335) funded by the UK Department for International Development (DfID) as part of their Fisheries Management Science Programme (FMSP). Further details about this project, the aim of which was to develop and promote adaptive learning approaches to fisheries enhancements, can be found in Garaway *et al* (2002). The views expressed here and in this report are not necessarily those of DfID.

The report starts with a framework (section 2) that was developed to guide evaluation of the adaptive learning approach, both process and outcomes, and to diagnose and address problems if outcomes were not as expected. Monitoring and evaluation is a significant part of the adaptive learning process so this report has two functions, being both an evaluation of the approach and the final stage of the implementation of the process itself.

Before discussing the results of the evaluation (section 4), discussion of evaluation methodology continues in section 3, which outlines some of the specific methods that were used to evaluate activities *during* the experimental cycle.

Section 4 then starts working through the evaluative framework and discusses outcomes in the Lao case, in particular whether the reductions we set out to reduce were in fact reduced, (and if not why not), and whether this led to adaptation in management (the main criteria of whether the *process* has been a successful one).

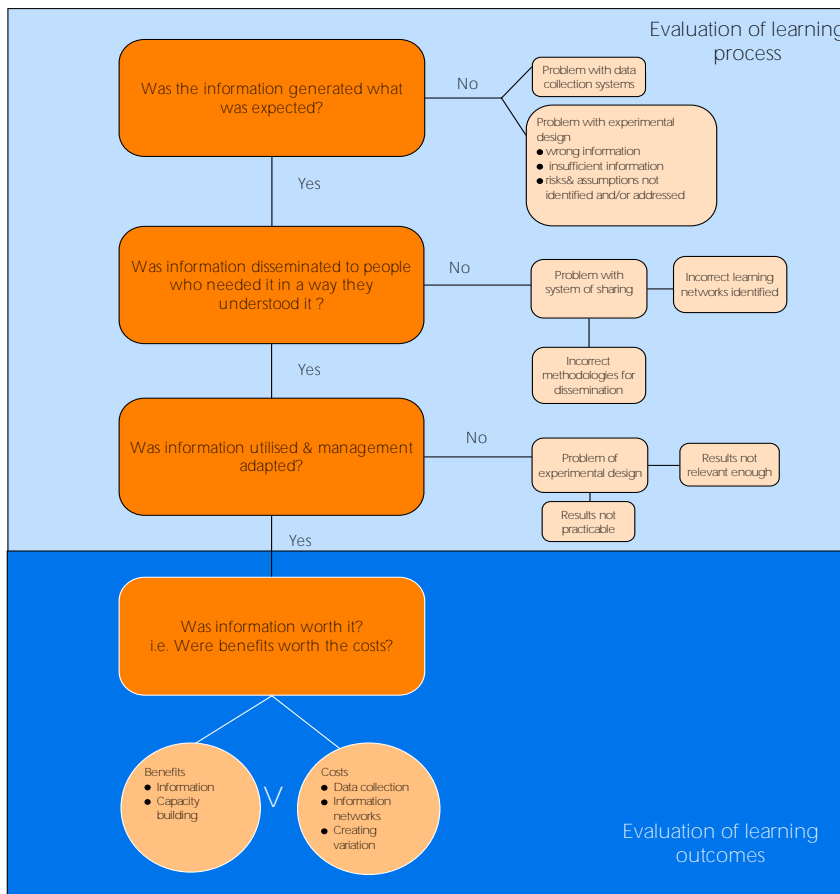
Section 5 then focuses on whether the outcomes of this process i.e. the information that has been generated, was worth the costs of acquiring it. Adaptive learning approaches incur costs; in data collection, in sharing information and possibly in forgoing short term costs for future term information gains. Dependant on the strategies undertaken, it can also require risk-taking and costs of this & deleterious outcomes (potential or actual) must also be taken into consideration. The costs and benefits of the approach are evaluated in terms of what happened in the Lao case i.e. whether taking an adaptive learning approach *in this instance* was worthwhile. However, section 6 draws out some more general conclusions and highlights some of the benefits, issues and challenges that such an approach can generate.

2 Framework for Evaluation

The adaptive learning approach aims to reduce uncertainties in natural resource management by taking an explicitly experimental approach. This approach may (or may not) incur short term costs, but the idea is that the longer term benefits of the information gained, in terms of improved management, will be worth these costs. This then is the ultimate criteria against which an adaptive learning approach should be evaluated, (and one that hopefully will have influenced the choice of strategy in the first place).

However, improvements to management can only be made if the process of adaptive learning generates the information desired and this information is subsequently disseminated and utilised. Before evaluating the benefits of the information gain, it is therefore necessary to evaluate the process itself in terms of whether it generated the results it was expected to generate. If it didn't, different parts of the process must be evaluated to see where problems lie. Evaluation is therefore a multi-tiered activity (with evaluation of outcomes within processes and processes within outcomes!). To help with this activity the framework below was developed to guide evaluation both during the experimental cycle and after it. Such a framework is generic enough to be useful in any adaptive learning circumstance.

Diagram 1 A framework to evaluate process and outcomes in adaptive learning



The structure of the results sections in this report (section 4 & 5) roughly follow this framework, starting from the top and working down.

3 Evaluation Methods

Information on small waterbodies and their management that was collected during the project was evaluated through statistical analyses and is not mentioned in any detail here (for more details of this see Arthur *et al* (2002)). Having analysed the information, the key *results* were then disseminated and subsequently evaluated by all stakeholder groups in terms of their implications for future management and the extent to which they had succeeded in reducing identified uncertainties. This was done through analysis and discussion at stakeholder workshops, Adaptation of management, if deemed necessary, could then take place.

As shown in the framework in the section above, if outcomes of this process (adaptation to management) were not as anticipated, it was important to be able to pin-point where problems had occurred and, in particular, whether the problem lay with experimental design, the way information was collected or the way it was disseminated / shared. Evaluation during implementation was therefore critical. These evaluations occurred during workshops at different stages of the experimental cycle (there were two cycles in all) and the evaluation methods are presented in Table 1. The questionnaires referred to are presented as Appendices 1 & 2 and some results are given in section 4.

Table 1 Methods for evaluation of the process of data collection and information sharing

Evaluator	Subject of evaluation	Role	Method of evaluation
District staff	Data collection methods	Data collector	Group discussions in district workshops
Village representatives		Data collector	Group discussions in village workshops
Provincial staff		Data collection co-ordinators	Meetings
District staff	Methods for training & disseminating information	Object of training & dissemination	Individual questionnaires in district workshops
Village representatives		Object of training & dissemination	Individual questionnaires in district workshops
Provincial staff		Trainers & facilitators at workshops	Self evaluation through questionnaires and round table discussions

At the end of both experimental cycles the two key groups of stakeholders (district staff and village representatives) were also asked to evaluate the adaptive learning process itself, in terms of the extent to which it had benefited them and the extent to which methods had been appropriate and

their participation in it satisfactory. This was done through questionnaires and group discussion and the questionnaires are presented in Appendices 3 & 4.

As can be seen, the process of implementation was monitored and evaluated during and after the experimental cycle by all key stakeholders. Some of the results of these evaluations are presented in the following section.

4 Evaluation of learning process

This section relates to the first parts of the evaluative framework presented in Diagram 1 i.e. evaluation of the learning process.

4.1 Was the information generated what was expected and was it shared and utilised?

As mentioned previously, results of the experimental strategy are not presented in any detail here as they are dealt with elsewhere.

In brief, the project carried out an active stocking experiment (in 35/38 villages) to evaluate the benefits of two different enhancement strategies in relation to waterbody productivity. At the same time, information on different management strategies was collected in order to evaluate the benefits and constraints of the different approaches to community fisheries management.

After the first experimental cycle (July 2000 – June 2001), evaluation of data revealed that the information generated was not what was expected, a disappointing result. Further analysis showed that the main problem was not with the data collection systems (although these could be and, after evaluation, were improved), but with the experimental design itself. Uncertainties had not been reduced because not enough of the stocked fish had been caught back and it became clear that the risks and assumptions associated with the stocking experiment had not been adequately addressed.

Whilst results were disappointing in terms of the original experimental aims, they did provide valuable information to improve implementation for the next cycle and highlighted problems with stocking in the region that had not been quantified before, thus some unexpected uncertainties had been reduced. Information regarding management enabled stakeholders to begin to compare different management approaches, again the first time this had been systematically done in the region.

All the information generated from the first cycle was shared with stakeholders during workshops, and participant evaluations suggested that methods for sharing information were successful. Results from all 'sharing information' workshops in 2001 and 2002 are presented in Figure 1.

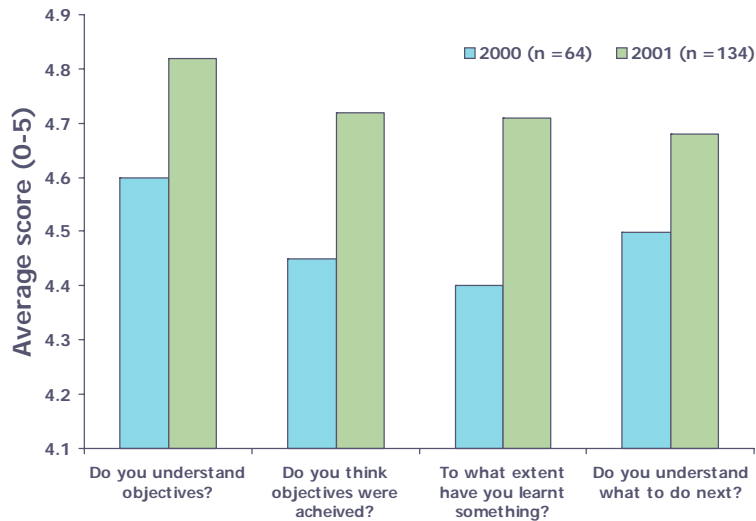


Figure 1 Comparison of the results of participant evaluations in workshops in 2000 & 2001

Each of the questions on the evaluation questionnaire could be ranked between 0-5, with 0 being 'poor' and 5 being 'excellent'. As can be seen, in both years the average score was between 'good' and 'excellent' for all questions. Sample size was greater in the second year due to the fact that an extra set of village workshops were undertaken – a direct result of comments on the evaluation form in the first. This was not the only adaptation that was made. Evaluations in the first year enabled the facilitation team to improve their methods and average scores from first year to second increased in all cases; scores relating to question 2, "achievement of objectives", and 3 "evidence of learning", significantly so ($p < .05$). In accord with the principles of adaptive learning, activities had been monitored and evaluated, adaptations in the light of new information made and learning increased.

At the end of the first year, several villages made adaptations to their management in light of what they had learnt about the different management approaches. Adaptations were also made to the experiment with new activities to try and increase fish survival rates for the following year.

Results in this first year were therefore mixed. The information generated was shared successfully and, in some cases, management had been adapted. On the other hand problems with experimental design had meant results of the active experiment were inconclusive.

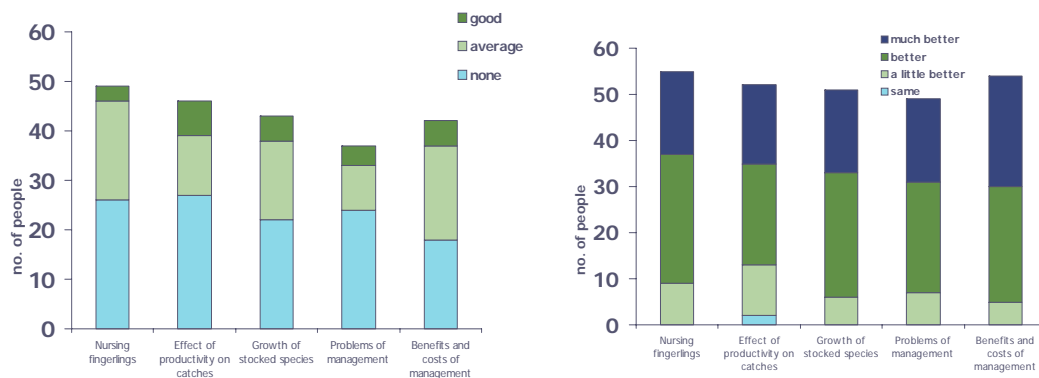
The same experiment was implemented again in the second year (July 2001 – June 2002) and further information on the different management systems collected. Evaluation at the end of this year revealed that the information generated from the active stocking experiment had reduced the uncertainties anticipated, a positive result. It had shown that, of the different species commonly stocked in Lao waterbodies, tilapia species grew best in high productivity waterbodies and carp species grew best in low productivity

waterbodies. These results were then shared with stakeholders and a set of very clear recommendations came out of them. Whilst it is too early to say if stocking strategies have been adapted in the light of this new information (stocking won't occur until end July 2002) given the clear information and the fact that evaluations suggested that comprehension was high (see Figure 1), it is anticipated that they will be. Information about management was also synthesised by government staff into a set of extension recommendations that have since been written into another output of this project, the Community Fisheries Guidelines (for more information see (Garaway *et al* 2002))

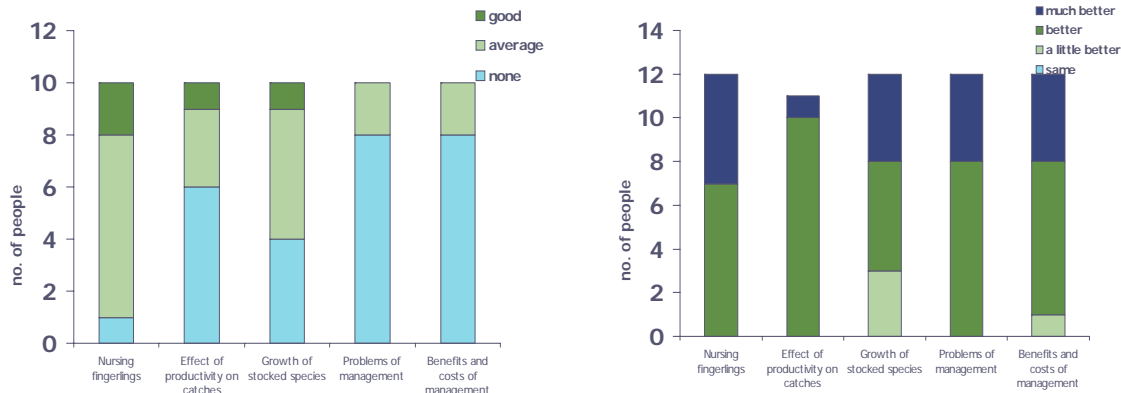
Given that the information generated had reduced the uncertainties expected, had been shared effectively with stakeholders and is expected to be utilised the question remaining is whether it was worth it and this is addressed in section 5. Given that it took two experimental cycles to answer the desired questions, costs relate to those incurred in both years.

4.2 Who learnt, what did they learn and how much did they learn?

Evaluation throughout the process had suggested that all stakeholders had learnt (see again Figure 1) However to answer the question more specifically the key stakeholders were asked to evaluate the extent to which their knowledge about enhancement management had improved as a result of this process. Results are presented in the figures 2, 3 on this page and figures 4 & 5 on the next.



Figures 2 & 3 Knowledge of village representatives before & after the process



Figures 4 & 5 Knowledge of district staff before & after the process

The results presented here are only some of those that stakeholders were asked to evaluate, but other results are comparable and these were chosen because of their greater relevance to the questions that were being addressed in these adaptive learning cycles. In both groups of stakeholders knowledge before beginning the process was, as anticipated, very low. This had been taken into consideration when implementing the approach by keeping activities simple and spending a considerable amount of time training and finding methods to explain ideas in uncomplicated ways. As can be seen, with the exception of 2 village representatives regarding the effect of productivity on catches, stakeholders perceived that their knowledge had increased as a result of this process with it being either a little better, better or much better. (In fact there was only one question that bucked this trend – very few stakeholders thought their English had improved as a result of the process!). As one would probably expect the answer ‘better’ was the most common put forward, but a significant proportion were ‘much better’, this category getting more responses than that of ‘a little better’.

The results indicate that the key stakeholders had learnt from the process, and in areas where learning had been anticipated. In this aspect alone then, the adaptive learning process can be said to have been a success.

Whether it was worth the costs (and to who) is discussed in the next section.

5 Evaluation of learning outcomes

This section looks specifically at the evaluation of costs and benefits as it relates to the Lao case.

5.1 Costs of information gain

As shown in Figure 1, costs of implementation refer to those for:

1. Data collection;
2. Information networks; and
3. Costs of creating variation.

The costs of creating variation can be further sub-divided into:

1. Costs for materials, equipment;
2. Opportunity costs of forgoing greater short-term benefits or incurring short term costs (e.g. reduced harvests) for longer term information gains.

In the Lao case, the costs of creating variation only included the former (which included stocking costs, and in the second year, nursing costs) and so were relatively straightforward to calculate. However this would obviously not always be the case. For villages in Lao PDR, discount rates were so high that few villages were in a position to forgo benefits they could get from stocking, so the experiment was designed so that, whatever happened, they were very unlikely to be any worse off than they would have been had the experiment not taken place. This was possible because, in general, experimental stocking rates were higher than the rates villages would normally stock (& villages were not paying for them). This meant that even if they did *relatively* worse than their neighbour, they were unlikely to do *absolutely* worse than they would have done without involvement in the experiment.

This was one of the crucial factors in experimental design that enabled us to get the full support of local communities. Such a constraint limited what was possible and we would anticipate this would be the case for *any* adaptive learning approach in a development context.

Costs then do not relate just to the absolute costs of implementation, but also to who is incurring them and whether they can afford it. In the Lao case, with the exception of the communities' costs of time spent collecting data and attending workshops, (and feeding costs if they were nursing fish), experimental costs were paid by external bodies (DfID) and this was not an issue. Costs to communities were therefore minimal and almost *any* benefits would result in a net gain for them. Table 2 shows the financial costs of implementing the approach over the years 1999 – 2002.

Table 2 Costs of implementation of the adaptive learning approach 1999 - 2002

Activity	Cost (£)
Total project costs (DfID project R7335)	207604
Project core costs (e.g. minus overheads)	148203
Local collaborator costs	30,000
Field costs (stocking, data collection, transport, equipment, workshops for sharing information)	21000
Stocking costs	3462

A range of figures have been given here and the benefits will be evaluated with reference to them all.

5.2 Benefits of information gain

Fish yields (Kg) in the years post implementation of the adaptive learning approach were significantly higher than those before the experiment began. However much of this can be explained by the fact that more waterbodies had been stocked and, generally, stocking densities were higher. Impact of stocking is also not what we are interested in evaluating. What makes adaptive learning approaches different to, say in this case, a stocking programme, is the *information* that the approach produces and it is the benefits of this gain in information that we are our primary focus.

In the first year, results from the active experiment were inconclusive. However, information was learnt about the benefits and costs of different types of management and also, as a result of information generated from the project, new activities were put in place to improve the chances of harvesting more of the stocked fish in the second year. Greater harvests of stocked fish were achieved and, making the assumption that the gain in yields was a result of information generated in the first year, a value can be put on that information as shown in Table 3.

In the second year the experimental results showed that carp do better than tilapia in low productivity waterbodies and tilapia do better than carp in high productivity waterbodies. It is too early to judge the actual impact of this information gain on the villages involved in the approach (let alone elsewhere) as they have not yet stocked in this year. However one way to judge potential impact is to predict the total expected yields (Kg) from waterbodies in the experiment *if* they had been stocked with the species most appropriate for their waterbody. This can then be compared with the actual yield from this year and any gains in yield could be assumed to be down to experimental information. This is presented and explained in more detail in Table 4.

Quantifying the gains in information about management is difficult as there is no one 'best' strategy, and maximum yield is not the only, or even the main, criteria for selection, with village traditions and ease of implementation being other crucial factors. Whilst it might be theoretically possible to work out yield estimates if village switched to the system with greatest yields per hectare (fishing days), villages would not make this switch based on this criteria and the result is therefore not meaningful. No attempt has therefore been made to quantify the benefits of this information, though undoubtedly real benefits have come from it.

Table 3 Benefits from information gain in year 1 (July 2000 – June 2001)

Total yields of stocked fish (July 2000 – June 2001) ¹	Total yields of stocked fish (July 2001 - June 2002) ²	Net gain in yields (Kg)	Value of net gain (£) ³
5978	8075	2097	2059

Table 4 Benefits from information gain in year 2 (July 2001 – June 2002)

Actual yields of stocked fish (July 2001 – May ⁴ 2002)	Hypothetical yields (July 2001 – May 2002) ⁵	Net gain in yields (Kg)	Value of net gain (£)
6596	13737	7141	6998

Adding gains from both years together comes to an expected total benefit of £9057 within one year of this particular experiment ending. Figure 6 shows the projected value of this gain in information over future years, *if* the same villages were to keep up the same practices.

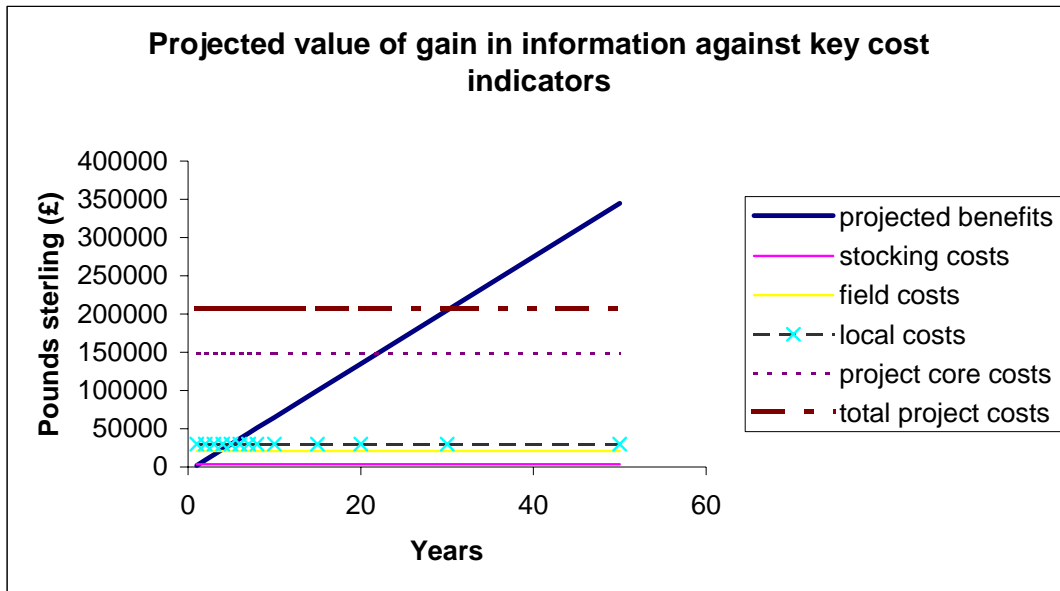


Figure 6 ⁶Projected value of information gain specifically from the active carp/tilapia stocking experiment.

¹ This figure is based on village records.

² At the time of writing this report, figures for the end of this years fishing season were not yet available. This figure is therefore an estimate based on actual yields up to May plus an additional estimate based on the yields for the same period in the previous year.

³ Average price of fish = 11000Kip/Kg, or £0.98/Kg

⁴ Based on village records

⁵ Based on villagers fishing exactly the same effort and with the same gears as in the 2001/2002 fishing season, the only thing different being the species of fish stocked. Some villages had not fished (or had pumped the waterbody dry and hence there was no estimate of gear hours). These waterbodies (12 of them) were not included in this estimate. Changes to those waterbodies suboptimally stocked include 7 (tilapia or (tilapia & carp) to carp only) 10 (carp (or carp & tilapia) to tilapia only). Seven waterbodies stocked exactly the same. Total in estimate 24 waterbodies. Average yield (kg/ha/gear/hour) in appropriate productivity = carp (low) .027kg/ha/gear/hr; tilapia high = 0.49kg/ha/gear/hour

Results show that stocking costs, field costs, and even all other local costs not directly from implementation are all recouped within five years. Costs including those of UK project staff, would take a lot longer to recoup. However these results are based on just the villages directly involved in the experiment (and not even all of them – see footnotes).

Another way to look at the gain of technical information is to value it on a per hectare basis. Simulated increases in total yields were 7141Kg, which, with the total hectares of waterbodies (who fished at all) being 113.2 gives an average yield of 111/ha⁷ (£109/ha). If villages stocked at the same densities and fished at the same average effort, the amount of hectares under this stocking and harvesting regime that would be required to recoup costs are;

- Stocking costs – 31ha
- Field costs - 193ha
- Local costs – 275ha
- Project core costs – 1360ha
- Total project costs – 1905ha

Whilst all these figures are hypothetical, they give some idea of the value of the information, specifically the technical information. Given that both Provincial staff and District staff understood the implications of the scientific results well, it is highly likely that they will be spread to other places both within the Provinces and beyond. Comparisons through both space and time show that the recouping of total costs, on the basis of technical information alone is well within reach. Of course results in earlier sections showed that these were not the only benefits of information gain, with knowledge being increased in other areas as well. One final benefit not yet looked at, which also relates to capacity, is the building of skills and this is dealt with in the next section.

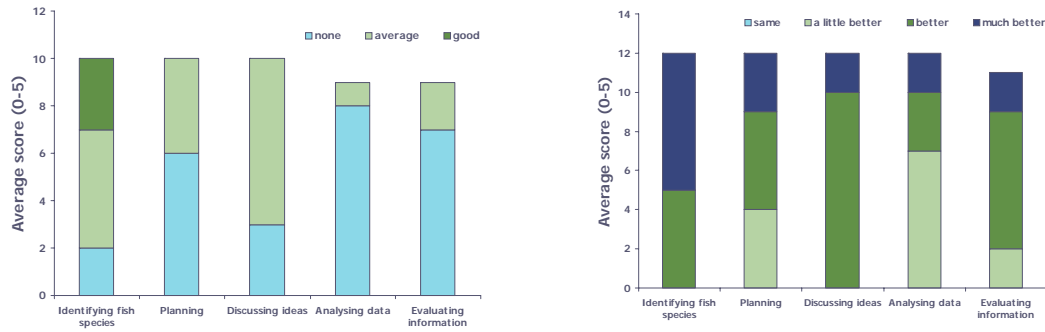
5.3 Building capacity

Village representatives and district staff were asked to evaluate the extent to which they thought their skills had increased as a result of the adaptive learning approach. Results are presented in figures 7-10. One benefit of skills over knowledge is that they can be applied in other areas of work and therefore are potentially more widely applicable.

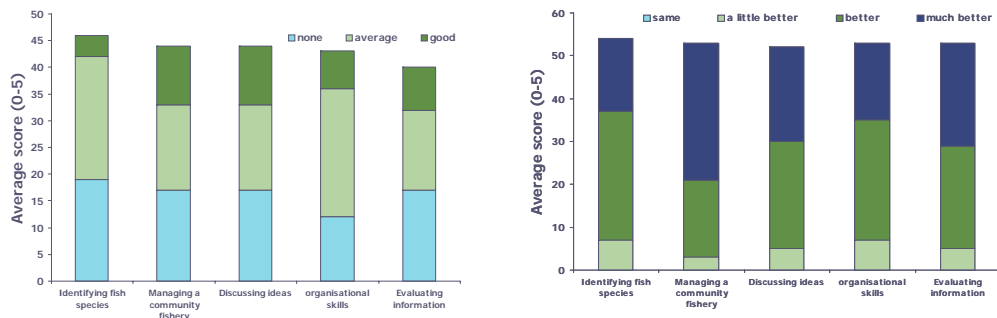
As with the knowledge discussed earlier, improvements had been seen in all areas (again not all the questions have been presented here though patterns are similar) and in fact more ‘much better’ responses were recorded here than for knowledge.

⁶ Based on the assumption that the villages involved in the approach will continue to manage their waterbodies and stock fish at 3500fingering/Ha.

⁷ This yield corresponds to that gained with the average fishing effort of this sub group, 1236 hours)



Figures 7 & 8. Skills of district staff pre and post implementation of the adaptive learning approach.



Figures 9 & 10 skills of village representatives pre and post implementation of the approach

Given that these skills had, in the main, not come from the information generated from the experimentation (one notable exception possibly being increased skill at managing a community fishery) this suggested that they had come from the way the activities throughout the cycle had been carried out i.e. with a focus on active participation, capacity building and communication. Such results demonstrate the benefits to be gained from working in this way and also why a *participatory* adaptive learning approach can produce benefits far greater than can be achieved by focusing on experimentation and/or information gain alone.

6 Summary and conclusions

6.1 Results on process in the Lao case

After two years, which was longer than anticipated, the information generated from the approach reduced the uncertainties expected, was shared effectively with stakeholders and is expected to be utilised. Evaluations during workshops showed that comprehension was high and adaptations to management from information collected in the first year has already occurred in some villages. Stakeholder evaluations of the whole process showed that they thought levels of participation satisfactory and methods appropriate and also showed that they believed both their skills and knowledge had been increased as a result of their involvement.

These facts suggest that from the point of view of the learning process, the approach was successful.

Methods for evaluating activities such as data collection and workshop effectiveness worked well in that they enabled us to monitor our progress and, crucially, adapt and improve. Both data collection methods and training methods were improved as a result of evaluation and the latter showed statistically significant improvements. It was found that the framework itself proved a useful tool for coping with the multi-tiered nature of evaluation.

6.2 Results on outcomes in the Lao case

Quantitative analysis of the benefits and costs of the information gain, revealed that local project costs (funded by DfID) could potentially be recouped within five years even if just the results of the carp/tilapia experiment are utilised and are only done so in villages involved in the experiment. With the potential for results being spread elsewhere (high given the levels of comprehension of Provincial staff and extension staff) and with all the other benefits of the approach that haven't been quantified here, the potential to recoup total costs relatively quickly is well within reach. With the spread of information being fundamental to its usefulness, the results show how important it is to integrate the learning of all into the learning approach. Results showing increases in skills show the feasibility of building capacity *at the same time* as generating information.

6.3 Implication of these for adaptive learning approaches

Results show that the adaptive learning approach can be a very successful way of reducing management uncertainties and building capacity. However, as was mentioned at the start, evaluation in this report can only specifically evaluate what happened in the Lao case and it cannot be assumed that this would be the case in all circumstances. Each would have to be assessed on a case by case basis, demonstrating again the need for constant evaluation.

Whilst we faced many challenges when implementing the approach (see below) there were a number of characteristics about the resources and management that we believe facilitated implementation, as described below;

- The resources in question were small waterbodies and given that these are ubiquitous throughout the lowland areas, the potential for finding adequate replicates for experimentation was high.
- Management objectives were similar enough in sites chosen that it was easier to find experimental strategies that would be relevant to all.
- Management in the villages was quite advanced in some cases with for example, pre-existing systems for monitoring and enforcing compliance and recognised management committees to act as representatives of 'community' interests. Whilst beneficial in some respects there was also a danger in this, with the possibility that committees were not acting in 'community' interests. To deal with this, visits were made to villages where district staff felt there were possibly some problems or

tension and opinions of households were sought. However, whilst it was not obvious how it could have been implemented otherwise, the fact that information flow stopped at the village management committees and was not extended any further into the villages was felt to be a constraint of the approach.

- Management systems already in place did not allow individual harvesting, with all fishing being carried out under the direction of the collective. Co-ordinating the activities of individual harvesters was therefore not the problem that it could be in other circumstances.
- The nature of the stocking and harvesting regimes meant that experiments could be conducted on an annual basis making the turnover of information high. This maintained interest in the approach, despite problems in the first year and also enabled costs of information gain to be recouped more quickly.
- The capacity to stock waterbodies also enabled us to develop experimental strategies where no-one was likely to be worse off than they would have been, as a result of involvement in the experiment. This we have identified as one of the potential constraints of implementing the approach in a development context elsewhere. Given frequently high discount rates and levels of vulnerability, local communities may not be in a position to suffer even small short term costs and this can drastically reduce learning options. It must be remembered that it is not only total costs against benefits that should be evaluated but also who the approach is costing and whether they can afford it. The capacity to stock certainly helped in the planning phases and enabled us to reach consensus more easily than might otherwise have been the case (and even then this was a non-trivial matter).

We believe that these characteristics made the approach easier to implement. This is not to say that the approach cannot be implemented if these characteristics are not present, only that their absence brings additional complications that will need to be addressed.

7 References

Garaway, C., Arthur, R.I, Lorenzen, K. (2002) Adaptive Learning Approaches to Fisheries Enhancements. Final Technical Report of the DfID Adaptive Learning Project (R7335). MRAG Ltd, London, UK

Arthur, R.I and Garaway, C.J and Lorenzen, K. (2002) Results of an experimental approach to community-led management of small waterbodies in Southern Lao PDR. MRAG Ltd, London

Appendix 1 – Workshop participant evaluation form

MRAG/RDC Workshop Evaluation Form (English)

Review and evaluation						
Did you understand the objectives of the workshop?	0	1	2	3	4	5
Were the objectives achieved?	0	1	2	3	4	5
Was the workshop well organised?	0	1	2	3	4	5
Do you understand what you need to do next?	0	1	2	3	4	5
Do you feel you learnt something?	0	1	2	3	4	5
What were the three most important things for you?						
1.						
2.						
3.						

Appendix 2 – Trainer workshop evaluation form

1. Preparation of workshop

	0	1	2	3	4	5	Comment
Identify objectives ?							
Identify activities & outputs							
Session plans included							
• Time for activity ?							
• Materials ?							
• Method ?							
• Beginning, middle & end ?							
• Identification of possible problems ?							
Was there variation in training methods (whole group, small group, individual work ?							
Was there enough time for preparation ?							

Further comments

What were the good points & what were things to improve ?

Presentation:

General	0	1	2	3	4	5	Comment
Could the participants understand the subject ?							
Was it interesting for the participants?							
Was it an appropriate level for participants ?							
Was there enough time ?							
Did we use the session plan ?							
Did the participants learn anything ?							
Introduction							
• Did we give participants an overview of the session ?							
• Did we explain the objectives & activities in							

the session ?							
• Did we link the session with previous sessions ?							
Middle							
• Was the process step by step ?							
• Were we flexible ?							
• Good use of overheads, computers, post-its, paper?							
End							
• Was there a summary of key points							
• Was there a link to the next section							

Further comments

Good things/ things to improve

2. Communication – Generally

Did you ?

	0	1	2	3	4	5	Comment
Speak clearly							
Explain difficult words							
Use clear writing/diagrams							
Answer participants questions clearly ?							
Get feedback from participants ?							
Encourage participant contributions ?							
Manage feedback sessions well ?							
Provide encouragement & motivate participants							
Be enthusiastic							

Further comments

What were the good points & what were things to improve ?

3. Budget and assessment of workshop

	0	1	2	3	4	5	Comment
Was the budget sufficient ?							
Did we achieve our required outputs?							
• In the workshop ?							

• In the workshop report							
Did the participants get a chance to evaluate the workshop							

Further comments

Additional ideas/ good points / things to improve

Appendix 3 – District Staff Project Evaluation Form

1. The project methodology

1A. Was your involvement in the project activities good?

Fill in the table with ✓

	Involvement			Comment
	Too little	Enough	Too much	
Collecting exploratory data (September – December 1999)				
Analysing data (District staff workshops)– May 2000, May 2001, May 2002				
Designing experiment				
Planning how to implement experiment				
Discussing plans with villages (Village Workshops June 2000 & 2001)				
Designing method of monitoring (Monitoring workshops July 2000 & July 2001)				
Monitoring (test fishing, district forms)				
Stocking & nursing				
Evaluation of information collected & evaluation of project methodology				

1B. How appropriate was the project methodology?

(0 = not appropriate methodology, 5 = very appropriate methodology)

Fill in the table with ✓

	0	1	2	3	4	5	Comment
Collecting exploratory data (Visits to districts. September – December 1999)							
Analysing data (District staff workshops)– May 2000, May 2001, May 2002							
Discussing plans with villages (Village Workshops June 2000 & 2001)							
Designing method of monitoring (Monitoring workshops July 2000 & July 2001)							
Monitoring (test fishing, district forms)							

1C. Any other comments about project methodology?

2. Skills & knowledge

2A. How good were your skills before the project and how much do you think your skills have improved because of this project ?

Fill in the table with ✓

	Before the project			Improvement because of project				Comment
	0	+	++	same	a little better	moderately better	much better	
Using Secchi depths								
Test fishing								
Identifying fish species								
Filling in forms								
Designing forms								
Planning								
Facilitating in workshops								
Working with villagers								
Discussing ideas								
Organisational skills								
Using computers								
Making graphics								
Analysing data								
Understanding graphics								
Evaluating information								
Working with foreigners								
Speaking english								

2B. How much did you know before the project and how much do you think your knowledge has increased because of this project ?

Fill in the table with ✓

	Before the project			Improvement because of project				Comment
	0	+	++	same	a little better	moderately better	much better	
Nursing fingerlings								
Transporting fingerlings								
Effect of productivity on catches								
Fish ecology								
Growth of different stocked species								
Different types of waterbody management								
Problems for villagers managing community fisheries								
Benefits and costs of different community fishery management systems								
Information required for understanding community fisheries								

Questions for group discussion – session 9

Split into three groups

Each group will discuss ONE of these project activities

- 1) District Workshops (Analysis and Monitoring workshops)
- 2) Village workshops (Planning and Discussion Workshops)
- 3) Monitoring (test fishing, district forms from 07/01 – 05/02)

Questions.

1. Discuss & write down 5 things that were good about this activities(s)
2. Discuss and write down 5 things that would have made these activities better.
(do not include financial issues)

Appendix 4 – Village Representative Project Evaluation Questionnaire

1. Project methodology & objectives

1A. Was your involvement in the project activities good?

Fill in the table with ✓

	Involvement			Comment
	Too little	Enough	Too much	
Planning experiment				
Discussing plans with Provincial & district staff				
Learning about the results of the experiment				
Designing monitoring forms (village records)				
Monitoring				
Stocking & nursing				
Sharing experiences				
Evaluation of information collected & evaluation of project methodology				

1B. How important and useful was the project?

(0 = not important / useful, 5 = very important / useful)

Fill in the table with ✓

	0	1	2	3	4	5	Comment
Is knowledge about community fisheries important for your village?							
Is knowledge about which species to stock important for your village?							
Is knowledge about the benefits of different management strategies important for your village?							
Compared to other activities, how important is your community fishery for making income?							

1C. Any other comments about the project?

2. Skills & knowledge

2A. How good were your skills before the project and how much do you think your skills have improved because of this project ?

Fill in the table with ✓

	Before the project			Improvement because of project				Comment
	0	+	++	same	a little better	moderately better	much better	
Identifying fish species								
Filling in forms								
Managing community fishery								
Discussing ideas								
Organizational skills								
Understanding graphics								
Evaluating information								

2B. How much did you know before the project and how much do you think your knowledge has increased because of this project ?

Fill in the table with ✓

	Before the project			Improvement because of project				Comment
	0	+	++	same	a little better	moderately better	much better	
Nursing fingerlings								
Transporting fingerlings								
Effect of productivity on catches								
Fish ecology								
Growth of different stocked species								
Different types of waterbody management								
Problems of managing community fisheries								
Benefits and costs of different community fishery management systems								

2C – Any other comments about knowledge or skills?

Questions for group discussion – session 4

Split into 6 groups

Each group will discuss ONE of these activities

- 4) Village workshops (Planning and Discussion Workshops)
- 5) Keeping village records
- 6) Stocking and nursing

Questions.

1. Discuss & write down 5 things that were good about this activities(s)
2. Discuss and write down 5 things that would have made these activities better.
(do not include financial issues)