

*Poster presentation for E-mail Conference on Aquatic Resources Management
for Sustainable Livelihoods of Poor People*

**“Community fisheries” in Savannakhet Province Lao PDR – an aquatic
resource system that benefits the poor**

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Introduction

In Lao PDR, small waterbodies are ubiquitous and play a very important direct role in the livelihoods of almost all rural households, primarily for subsistence needs but also, and increasingly, for income generation (Garaway 1999). Household participation in such fisheries is almost universal (Claridge 1996, Garaway 1999) and it has been shown that personal fishing in small waterbodies accounts for, on average, at least 70% of the fish acquired by rural households (Garaway 1999). It has also been shown that when household size is taken into account, members of the poorest rural households utilise local fishery resources the most and have the highest total catches. In one study, each poor household member caught approximately 8-10kg more, annually, than members from other socio-economic groups, though it must be said that variation in catches was far greater between villages than socio-economic groups (Garaway 1999).

This poster reports on an initiative, currently taking place in Savannakhet Province (& others), where communities stock and manage small waterbodies in the vicinity of their villages to generate income for community development. Given that this stocking frequently catalyses changes in how small waterbodies can be used and who they can be used by, this raises important questions about what exactly the benefits of such systems are and to who, increasingly important given the traditional significance of small waterbodies as subsistence fisheries. This was the subject of detailed investigation in a DfID sponsored project starting in 1995.

Stocking initiatives in Savannakhet Province

In Savannakhet Province, stocking of small waterbodies, particularly with Nile tilapia *Oreochromis niloticus*, and to a lesser extent common and Indian major carp, has been actively promoted by the Provincial government since 1994, and the practice is spreading rapidly. Waterbodies currently subject to enhancement include oxbow-lakes, natural depressions and man-made reservoirs of sizes ranging typically from 1 – 20 Ha. Typically these waterbodies are under the *de facto* ownership of one, or two closely-connected, villages and are adjacent to the villages concerned.

Government support villages through technical advice, part-payment of fingerlings and facilitating ‘study tours’ to villages already involved with stocking. However, operational rules regarding management, including the monitoring and enforcement of these rules, are predominantly devised and carried out by the communities themselves.

In such management systems, personal subsistence fishing is commonly prohibited or very much restricted. Instead, most commonly, the resource is fished by teams under the supervision of a management committee in a period of low agricultural labour demand (between January and May). Much of the fish harvested is sold producing village income for community

development whilst the allocation of the remaining fish is determined by rules also set up by local decision-makers. Other less common systems in Savannakhet include renting the waterbody to a group inside the village or, as is seen in N.E Thailand, holding an annual fishing day (Garaway 1999).

Benefits of community fisheries

The principle technical benefit of these systems was found to be an increase in harvesting efficiency as opposed to overall yields. Whilst it was found that these management systems had a strong positive effect on both standing stocks and biological production potential (Lorenzen *et al* 1998), low levels of effort and selected harvesting of the larger stocked species only, meant that overall yields were not different between enhanced and non-enhanced fisheries, i.e. the potential for increased production was not realised (Garaway 1999). However, harvesting efficiency and hence the productivity of labour in the fishery increased greatly by up to a factor of three, and this was appreciated and valued highly by stakeholders (Garaway 1999). Closer analysis of harvesting rules suggests that whilst the communities recognised yields could be higher, so would be the associated costs and therefore alternatives were chosen that better fitted with local needs and circumstances.

In a detailed study of four villages, household benefits from the stocked waterbodies were found to include: a cheap source of good quality fish; free or 'heavily discounted' fish at times of household emergency (such as funerals); decreased personal cash contributions to the community development fund; increased community income for improved community services (in some cases); decreased personal household fish contributions for when the village entertained guests; and payment (in fish or sometimes cash) for communal harvesting and marketing. Selling fish cheaply to individuals from surrounding villages, and entertaining guests, also fulfilled a traditional social function of strengthening links between villages (Garaway 1999). In a household survey covering all socio-economic groups, one or more of these benefits was perceived to be both beneficial and desirable by all respondents.

Regarding the distribution of the benefits, no groups within the village were excluded and the new benefits were distributed evenly across socio-economic groups. With their higher capacity to buy fish, richer households were able to take more advantage of the new market supply of fish than the poorest socio-economic groups. However, this saving was small at less than US\$2/household/season. In addition, it could be argued that the poorest households, with less household economic surplus, benefited more relatively from the decreased personal cash and fish contribution needed to fulfil community obligations. In addition, the insurance device of fish at times of household emergency, potentially crippling costs for the poorest households could also be expected to benefit them more.

Regarding costs, despite loss of personal use, villagers from all socio-economic groups did not perceive they had been adversely affected by access restrictions. This was because either they had other convenient places to fish or, when this was not the case, it had been taken into consideration by the rule designers and the access restrictions were correspondingly less severe.

Evidence suggests therefore, that whilst the nature of benefits had changed, villagers valued the new benefits and locally designed rules accounted for local fishing for subsistence needs.

Concluding remarks

Community fisheries, as described here, can benefit the poor in a number of different ways.

- Provide a source of income for community development in places where such income is greatly required and there are few other means of acquiring it
- Produce benefits that are open to all members of a community irrespective of their socio-economic status
- Potentially provide additional benefits to the poorest community members at times of household emergency
- Extend new stocking technology to a large sector within a community at little personal risk or cost to individual households. Given the relatively low set up costs, such systems need not be restricted to the relatively richer villages.
- Increase village managerial capacity, a sense of ownership and awareness of the importance of aquatic resource management.

This is not to say that there are not still a number of issues that need to be addressed. Firstly, given the importance of the subsistence fishery, great care must be taken in the choice of waterbodies for such initiatives. Secondly, in Savannakhet Province response to stocking in rural communities has been varied. Of thirty-one villages and waterbodies studied, twenty supplied new institutions to manage their newly enhanced waterbody, and subsequently maintained these new institutions, whilst eleven did not (Garaway 1999). It was found that communities were more likely to supply new rules when there was a commitment to do so *prior* to stocking. Such communities devised the idea themselves, or in partnership with the government fisheries department, and at least part-financed the stocking. Having information about benefits from stocking, in particular first-hand information gained from visiting other villages enhanced such commitment. Other factors encouraging supply of new rules included the presence of skilful leaders and/or entrepreneurs and district government staff in the village (Garaway 1999).

Community management of enhanced small waterbodies is still a subject of ongoing collaborative research in Lao PDR between MRAG, London & RDC, Savannakhet in a DfID sponsored project entitled 'Adaptive learning approaches to fisheries enhancement'.

References

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