

# Focusing Small-scale Aquaculture and Aquatic Resource Management on Poverty Alleviation



*A young girl helps out in her parents small-scale fish nursery*

NETWORK OF  
AQUACULTURE  
CENTRES  
IN ASIA-PACIFIC



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**STREAM**

# Focusing Small-scale Aquaculture and Aquatic Resource Management on Poverty Alleviation



*Participants at the expert consultation.*

**Food and Agriculture Organization of the United Nations**

**Bangkok, Thailand, February 12-14, 2002**



**STREAM**



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## Preparation of this document

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There has been a growing awareness within the aquatic resource sector of the need to address poverty more specifically and more strategically. The Expert Consultation was organised in order to provide field-level professionals in Asia with a unique opportunity to come together to share experience on working in the field of poverty alleviation and aquaculture, and to prepare a platform for future networking. The 22 participants in the consultation came from a range of field backgrounds (see Appendix 1) in eight regional countries and are currently working with NGOs, donors, government departments and regional organizations (MRC, NACA) and regional offices of international organizations (FAO, ICLARM).

The consultation was organised to share experience and produce recommendations under the broad thematic headings of:

1. Understandings of poverty and poor people’s livelihoods, and models for poverty alleviation
2. How to effectively target poor people, and contribute to sustainable livelihoods
3. How to identify and overcome the constraints to poor people’s entry into aquaculture
4. From theory to action - recommendations and guidelines for implementation

All participants prepared brief presentations on a range of themes, as well as brief papers. Sections of many of these papers have been included in this report (and are referenced in the bibliography). The full papers will be published in Aquaculture Asia, and made available via the eNACA and STREAM websites ([www.enaca.org](http://www.enaca.org) & [www.streaminitiative.org](http://www.streaminitiative.org)). The conclusions of the expert consultation are targeted at field managers involved in poverty alleviation and aquatic resources management, policy-makers, and donors.

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### **ABSTRACT**

This report provides a background to the issues of focusing aquaculture on poverty alleviation based on the conclusions of an FAO/NACA Expert Consultation which was organised in order to provide field-level professionals in Asia with a unique opportunity to come together to share experience on working in the field of poverty alleviation and aquaculture, and to prepare a platform for future networking.

Living aquatic resources play a fundamental role in sustaining the livelihoods of many of the rural poor in Asia; providing crucial buffers to shock, food security and opportunities for diverse and flexible forms of income generation. In many cases, the poorer people are, the more dependent they are on aquatic resources, particularly low value fish and non-fish aquatic resources. Women often play important roles in aquatic resource use and management, and aquaculture interventions may have particular benefits for women.

Small-scale aquaculture and aquatic resource management hold considerable potential to contribute to poverty alleviation. In order to realise this potential, poverty alleviation should be taken as the strategic starting point for aquaculture interventions. This has significant implications for how interventions are conceptualised, planned and executed, and the institutional arrangements. Distinctions between aquaculture and the management of living aquatic resources are often artificial and devalue the flexible and often complex relationships between aquatic resources the livelihoods of the rural poor.

As with any production-based intervention, the poorest groups face significant constraints to entry into aquaculture. Opportunities do exist to overcome these constraints, and aquaculture offers many opportunities for livelihood benefits that other sectors do not offer. Aquaculture technologies appropriate for poor people are now largely in place. The greater emphasis is on more effective extension of low-cost technologies, appropriate management practices to poor people and securing rights of access and control, rather than technical research.

Understanding the context of poor people's livelihoods is essential. Effective poverty alleviation requires assessment of poor people's needs and identification of opportunities that allow for entry by poor people into aquaculture production and related activities. This in turn requires more sophisticated yet workable understandings of poor people's livelihoods and the causes and characteristics of poverty. A prerequisite for this approach is greater participation by poor people, together with innovative institutional arrangements and partnerships between governments, NGOs, civil society groups, poor people and donors.

#### **Distribution:**

FAO Member States in Southeast Asia  
FAO Fisheries Department  
Fisheries Officers in FAO Regional Offices  
Network of Aquaculture Centres in Asia (NACA)  
Regional Fisheries Organizations  
Mekong River Commission (MRC)

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## 1. Summary

1. Living aquatic resources play a fundamental role in sustaining the livelihoods of many of the rural poor in Asia; providing crucial buffers to shock, food security and opportunities for diverse and flexible forms of income generation.
2. In many cases, the poorer people are the more dependent they are on aquatic resources, particularly low value fish and non-fish aquatic resources.
3. Women often play important roles in aquatic resource use and management, and aquaculture interventions may have particular benefits for women.
4. Small-scale aquaculture and aquatic resource management hold considerable potential to contribute to poverty alleviation. In order to realise this potential, poverty alleviation should be taken as the strategic starting point for aquaculture interventions. This has significant implications for how interventions are conceptualised, planned and executed, and the institutional arrangements and partnerships.
5. As with any production-based intervention, the poorest groups face significant constraints to entry into aquaculture. Opportunities do exist to overcome these constraints, and in many contexts, aquaculture offers opportunities for livelihood benefits that other sectors do not offer.
6. Distinctions between aquaculture and the management of living aquatic resources can be misleading by undermining the flexible and often complex relationships between different types of aquatic resources in the livelihoods of the rural poor.
7. Aquaculture technologies appropriate for poor people are now largely in place. The greater emphasis is on more effective extension of low-cost technologies, appropriate management practices to poor people and securing rights of access to and control over aquatic resources, rather than technical research.
8. Understanding the context of poor people's livelihoods is essential. Effective poverty alleviation requires assessment of poor people's needs and identification of opportunities that allow for entry by poor people into aquaculture production and related activities. This in turn requires more sophisticated yet workable understandings of poor people's livelihoods, the causes and characteristics of poverty, and the socio-economic worlds in which poor people operate. A prerequisite for this approach is greater participation by poor people.
9. Poor people's livelihoods often depend on a range of resources and livelihood activities, of which aquaculture may be an important component. In these cases, aquaculture needs to fit with and complement other activities, rather than attempt to replace such activities.
10. Effective management of small-scale fisheries (including rice-fields, backwater swamps, and irrigation canals) by local resource users holds considerable potential for poor people. Small-scale aquaculture is often an important component of management of wild fisheries.
11. Placing poverty alleviation first requires innovative institutional arrangements and partnerships between governments, NGOs, civil society groups, poor people and donors.
12. Fisheries institutions are traditionally oriented to technical issues, and face serious budget and personnel constraints. They often have limited experience in training and extension methods appropriate for poor people. It is important to create new learning opportunities for these institutions so that they are able to provide more appropriate services to poor people. It is also important that the skills required to do so are valued and respected within the institutions.



Young shrimp fry collector - Sundarbans.  
Photo: G. Grepin.



## 2. Introduction

### 2.1 Focusing aquaculture on poverty alleviation

Small-scale aquaculture and aquatic resource management are fundamental to the livelihoods of many of the rural poor in Asia. There is growing evidence that in many cases the poorer people are, the greater their dependence on aquatic resources, particularly low-value fish and non-fish aquatic resources.

With recent shifts in development thinking there is a growing emphasis on poverty alleviation in the aquatic resource sector (as indicated in the Bangkok Declaration of the Conference on Aquaculture in the Third Millennium). This is at least partly in recognition of the failures of previous development interventions to adequately address the needs of the poor but also in recognition of the further potential that aquaculture holds for poverty alleviation.

Often the aquatic resource sector has had only a partial understanding of poverty alleviation, while at the same time, the poverty alleviation sector has had a limited understanding of the significance of aquatic resources in rural livelihoods and the potential aquatic resources interventions hold for poverty alleviation.

In considering strategic priorities for poverty alleviation the technologies for small-scale aquaculture are now largely in place. While there is a continuing need for adaptive, small-scale technological development in order to meet the needs of poor people the main requirements are:

- How to extend these technologies to poor people
- How to create opportunities for poor people to derive livelihood benefits, including from management of wild fisheries, and common aquatic resources
- How to ensure development institutions are more responsive to the needs of poor people.

Rather than thinking in terms of aquaculture development, the emphasis now is on *aquaculture for development*. In order to effectively address poverty alleviation, poverty and poor people's livelihoods need to be placed as the starting point for intervention, with small-scale aquaculture and aquatic resource management one of a number of strategic tools for achieving this objective. This clearly has significant implications for how poverty alleviation interventions are to be conceptualised, and how aquaculture should be integrated with other activities.



*Children often play a role in aquaculture and fishing activities.*

Poverty alleviation and development are not purely technical and managerial issues. In order to address poverty alleviation and development effectively, we need a better understanding of poverty and poor people's livelihoods, and of what development means. Any intervention must be based on a sound strategic understanding of the factors that make people poor, and of the ways in which poor people can use and derive benefits from aquatic resources.

### 2.2 Understandings of poverty

There are many dimensions to poverty and correspondingly many strategies to address poverty alleviation. People are poor in different ways, in different places and at different times.

Over recent years there have been considerable shifts in thinking about poverty. At the same time there have been significant changes in thinking about aquaculture and aquatic resources, and how aquaculture can contribute to poverty alleviation. Some of these trends are summarised in Box 1.

Increasingly poverty is not seen solely in terms of deficiencies in production and income, but also in terms of wider social factors that limit poor people's access to

## Box 1: Trends in poverty and aquaculture development thinking

### Previously

#### Trends in poverty and development thinking

- Emphasis on increased agricultural production
- Generating Income, Employment and Savings
- Modernisation - based on development and transfer of technologies
- Key role of 'model farmers' and change agents
- Theories of 'trickle down' - no specific targeting of poor people except through welfare
- Market reforms - 'liberalisation', Holistic approaches & Basic needs
- Farmer first - importance of indigenous knowledge and participation
- Understandings of poverty and models of poor people's livelihoods emphasising a range of resources, and the means by which resources are converted into livelihood benefits

#### Trends in aquaculture development

- Aimed at increases in production to compensate for increased populations and declines in wild fishery productivity
- Based on the development and transfer of technologies - research & development, and extension
- Ensuring seed supply through centralised, state run hatcheries. Institutional support focused on development technical capacity
- Assumption that benefits would reach the poor. Very often, the poor did not derive benefits
- Growing awareness of the importance of wild fisheries and other aquatic resources - particularly for the needs of the poor
- Growing awareness of farming systems and importance of poor people's participation
- Recognition of importance of decentralised seed supply - e.g. with seed and fry traders

### Present day

and control over their resource base, and limit their ability to convert resources into positive livelihood outcomes.

Poor people may be poor for many reasons, not merely as a result of a lack of resources, but out of weak entitlements to convert resources into livelihood outcomes - for example, low or volatile prices or lack of market demand for poor people's products.

Understanding how people convert resources into outcomes requires an understanding of how individuals fit into households, and into the wider social arenas in which they operate - arenas of community, markets and state. For example understandings of the significance of gender within households have illustrated how in some cases women and girl children may not have access to nutritional benefits within the household, despite increases in household food production. Equally increases in aquaculture production in poor areas may not benefit poor people if they are not able to afford the fish produced. Issues of geographical and cultural remoteness, exclusion, and lack of power in decision-making processes are now increasingly presented as dimensions of poverty to be addressed.

Access to the benefits of planned development (for example, in the form of projects) often is a crucial input to livelihoods. In some cases access to such planned development is regarded by local people as the main factor determining whether they are poor or not. In more hierarchical societies, the wealth and power generated by planned development for certain groups allows them to strengthen their own positions and inequitable structures at the expense of poorer groups. In this way planned development may actually make poor people poorer.



*More than just fish - crustaceans, molluscs, amphibians and insects are all collected. Photo: G. Grepin.*



*Floodplains incorporate agriculture and fisheries in a continuum. Fish, aquaculture and agriculture are all linked by the water that surrounds them. Photo: G. Grepin.*

Changes in thinking about poverty have significant impacts for how aquaculture can contribute to poverty alleviation.

These include:

- More emphasis on integrated approaches rather than sectoral approaches
- Identifying opportunities for poor people other than as primary producers (for example, as traders, processors)
- Ensuring technologies are appropriate, low risk and affordable
- Securing market access for poor people, and markets for poor people's produce
- Collective interventions, including securing poor people's access to and control over common property resources
- Supporting rights of poor people to participate effectively in development planning



*Opportunities for servicing aquaculture - fish cage making in Cambodia. Photo: G. Bizzari.*

Rather than develop a definition of poverty, the Expert Consultation reviewed a wide range of aspects of poverty that projects represented at the Consultation are addressing, and the strategies that are being adopted. These are summarised in Box 2.

### **2.3 Understanding the context of poor people's livelihoods**

The range of experience represented in the Expert Consultation illustrates the fundamental importance of understanding the context of poor people's livelihoods and the social arenas in which poor people operate as the starting point for poverty focused development initiatives.

Understanding of context is essential in order to:

- Analyse the ways in which people are poor
- Identify the poorest groups
- Develop appropriate poverty alleviation strategies

Poor people are involved in diverse and dynamic livelihoods strategies utilizing a wide portfolio of resources - material, economic, natural, human and social. This diversity is locally specific, and dynamic. Poor people are poor in different ways, and at different times in different places.

There are also structural dimensions to poverty, such as class, patron-client relations. People are poor because of inequitable relations of power, and not merely as a result of shocks such as natural disasters, sudden failures in production. Poverty alleviation is therefore not merely concerned with providing temporary relief from hardship but at addressing deep-rooted, and often complex social processes.

Appropriate development interventions to address poverty alleviation must be based on a thorough understanding of these livelihoods issues. This requires an iterative and learning approach with effective participatory communication and needs to be built into the method of development from the very beginning of project formulation to monitoring and evaluation. Very often these issues have been added on to project activities, rather than forming the basis for interventions.

Poor people face particular constraints to uptake of new technologies and livelihood activities - due to such factors as lack of resources, aversion to risk, uncertainty and vulnerability - all of which limit capacity for long-term planning. As with all other interventions, there are also constraints to entry into aquaculture, but significantly in many contexts aquaculture holds advantages over other economic activities, such as livestock, or other agriculture based activities.

## Box 2: Aspects of poverty addressed and strategies adopted

### Aspects of Poverty

- Food insecurity
- Low income
- Limited economic opportunities
- Limited production options
  
- Limited access to credit
  
- Poor knowledge and skills
  
- Weak access to aquatic resources & common property resources
  
- Weak access to support service
  
- Weak rights & low level participation in political processes
  
- Poor health
  
- Conflict
  
- Gender
  
- Class, Caste, Ethnicity & Religion
  
- Environmental vulnerability & degradation
  
- Weak development & delivery institutions
  
- Weak policy framework

### Strategies

- Integrated aquaculture & agriculture
- Diversification of agricultural production
- Extension of low-cost, low-risk technologies
- Extension of non-pond based aquaculture
- Introduction of indigenous species
- Supporting entry into non-production based opportunities
  
- Supporting the provision of inputs
- Decentralised seed production
- Linking farmers with local lending institutions
  
- Promoting education - so that poor people can analyse their resource and livelihood contexts, and devise appropriate livelihood strategies
- Informal training
- Site based training, and exchange visits
  
- Supporting local organisations & local groups
- Partnership with local government
- Community resource conservation & management
- Improved management of dry season refuges
  
- Supporting extension services (including training)
- Participatory extension activities including Farmer Field Schools, and Farmer to Farmer training
  
- Supporting civil society institutions, partnerships and dialogue
  
- Improved nutrition (i.e. role of aquatic resources as sources of animal protein)
- Education and awareness
  
- Local level conflict management
- Participatory planning involving all stakeholders
  
- National level advocacy
- Effective targeting of women
- One man, one woman training schemes
- Identifying opportunities for women
- Ensuring women and girl children benefit from household nutritional improvements
  
- Targeting
- Address structural causes of marginalisation
  
- Community management conservation initiatives
  
- Institutional capacity building
  
- Supporting policy framework development

### 3. Targeting poor people

Historically there has only been limited concern with targeting of poor people. This is partly due to assumptions that downstream benefits of general increases in aquaculture production would lead to livelihood benefits for the poor. Where there has been targeting there is a growing awareness that those targeted have rarely been from the poorest groups, and often from the upper levels of rural society.

If poor people are not targeted the benefits that accrue to non-poor groups are often used to strengthen their own economic position, leading to further differentiation, and further restricting opportunities for poor people's entry into economically viable aquaculture production. Rather than 'trickling-down' benefits may in fact 'trickle-up'.

Targeting is necessary in order to:

- Identify different types of poor people
- Ensure that benefits reach poor people
- Devise strategies that are appropriate for poor people
- Prevent benefits being captured by the non-poor, at the expense of poor people

By relying on one set of indicators to identify poor people we may miss considerable sections of the population that are poor in other ways. A common approach to identifying poor people has been to apply a 'poverty line' (determined by a range of criteria such as income, expenditure, calorie intake). However there are several problems with this kind of approach.

- Application of a specific poverty line is somewhat arbitrary (especially when this relates to an indicator such as 'household income'). Slight variations in criteria of poverty may cause large changes in defining the group who are 'poor'
- There may be a considerable range within the group of 'the poor' identified by one cut-off line. This is particularly true if the criteria are used to identify poor areas, or poor villages. Whilst poor areas and villages may be targeted, it does not necessarily follow that poor households will be reached
- There may be groups of people who do not fall within the category of 'the poor' as defined by a poverty line, but who may be vulnerable to slipping into such a group. These people are sometimes referred to as 'tomorrow's poor'. If not targeted they may well become poor - perhaps even as the result of project interventions

Recent understandings of poverty have illustrated that the poor are not a homogenous group, and that there are lots of different categories of 'poor people'. In recognition of this, many donors refer to target groups of 'vulnerable poor', 'tomorrow's poor' and 'the poorest of the poor'.

Once again context is decisive in determining categories of poor people. People have their own categories of who is poor people based on local characteristics and causes of poverty. The range of categories of poor people in Bangladesh is presented below.

The categories of poor people depend on local circumstances. It is significant to note that within the 'poor' there may be many different categories, and that some groups may be so marginalised that they are not even represented in 'communities' or villages.

Gender is very often a crucial factor in determining poverty. In many situations women (and girl children) have limited access to resources, and limited livelihood options. Women are often poorly represented in village meetings, and have limited influence. Even within poor households women and girl children may not receive shares from production equal to those of men and boys. Female-headed households in many parts of Asia are often identified by local people as constituting a specific category of poor people. There is also growing evidence that as with other categories of poor people, wild aquatic resources are of particular importance for poor women, and that aquaculture activities based near the homestead hold advantages over other production activities.

Based on the practical experience represented in the Expert Consultation there are a number of recommendations regarding targeting.

#### 3.1 Who can aquaculture work with?

There has been some concern that aquaculture interventions have not always directly addressed the needs of the poorest people. It has sometimes been argued that as aquaculture requires resources such as land, ponds, water, credit and other inputs that by definition those involved in aquaculture are not the very poorest. Experience from the Expert Consultation clearly demonstrates that if aquaculture is appropriately planned there are considerable opportunities for poor people's entry.

While poor people face constraints to entry into all production based interventions, aquaculture offers significant advantages over other activities (such as farming, livestock).

These include:

- Low cost technologies, using available on-farm inputs
- Low investment and low levels of risk
- Low labour input requirements that fit with household divisions of labour
- Low levels of production may provide important sources of household nutrition, and buffers against shocks
- Easily integrated into other livelihood and farm activities

### Box 3: Recommendations for targeting

- Targeting is necessary and appropriate, helping to prioritise and focus, thereby ensuring efficiency
- Targeting should be based on a range of criteria and a range of participatory methods
- Local people's categories of the poor and explanations for poverty should be applied
- Gender issues are key - there should be greater emphasis on targeting women applying gender differentiated data, ensuring the effective participation of women
- Targeting should be inclusive rather than exclusive - there may be good reasons for including non-poor (for example to overcome jealousy and prevent conflict). Targeting should aim to include the broadest group possible, but developing specific mechanisms to overcome the constraints to poorer people's entry, and to ensure that benefits accrue to poorer people
- Targeting poor people is a continuous part of the development process. It is important to continually refine strategies so that they are appropriate to poor people's needs
- Poor people should be involved in defining objectives and strategies, and indicators of 'success'
- Applying a range of categories of poor people is also an important means of measuring impact on different groups
- Not targeting the poor poses a significant risk of exacerbating differentiation between rich and poor, increasing marginalisation and social conflict



Poor people's activities often exist side by side with larger scale commercial activities, but may be overlooked. Photo: K. Pratt, Laos 1999.

### Box 4: Categories of poor people - experience from Bangladesh

Experience from Bangladesh indicates that there may be many different social categories, and many different categories of poor people. These may include the following categories of households:

- Rich - large landholdings, cattle & draught power, produce surpluses, employ wage labour, can get loans, dominate local power structure
- Middle - moderate access to land, have cattle & access to draught power, no food deficits but small surplus, have access to credit but not to meet consumption needs
- Socially poor - have some land, able to meet household food requirements for 2-6 months from their own production. Adopt various livelihood strategies to meet their needs. Good ties to better-off families and able to secure employment and access credit in times of crisis. Also have access to government & NGO interventions during crisis periods
- Helpless poor - landless or functionally landless but do have homestead, no food security & can suffer from continuous food deficits, wage labour and share-cropping, vulnerable to shocks (viz illness), no fall back in crisis periods, rarely have access to government loans but may be able to access NGO loans
- Bottom (or 'Hated') poor - landless with neither homestead nor arable land, living on borrowed land, poor quality houses, living in constant fear of eviction, may be headed by widow or elderly man, no able-bodied wage earners or wages insufficient to support family, always hungry, women and children engaged in food foraging, collecting fuel, and begging, high prevalence of illness due to poor food access, no access to loans, considered too much of a risk for NGOs to work with them, may not be identified as being part of the community and may be excluded from participatory wealth ranking exercises



Communal water resources can be managed if access issues are resolved. Photo: I. de Borhegyi.

There is a growing body of regional experience of aquaculture interventions working with some of the poorest groups, even those with no land resources. This kind of experience could well be adapted to other situations.

While opportunities for poorer people do exist unless the structural reasons for poverty are addressed, the benefits may be limited or short-lived.

The example from Bangladesh illustrates the need to secure and enforce poor people's rights of access to and control over common resources. This may involve supporting their legal rights against the interests of powerful elites. Such strategies require specialised support outside the aquatic resources sector, and innovative partnerships.

### Box 6: Targeting the landless for aquaculture: Experience from the Northwest Fisheries Extension Project, Bangladesh

NFEP promoted a variety of culture systems including hapa spawning and nursing of fish, hapa nursing of *Macrobrachium* post-larvae to juveniles and cage culture of fish. This enabled totally landless households, who were perhaps squatting on river banks, to generate income and animal protein from fish culture activities if they could get access to a water body. Rice-fish culture was also promoted by NFEP and was adopted by some households working as share-croppers i.e. paying over a crop share (up to 50%) for the right to cultivate someone else's land

Working with the totally landless requires longer term support since they are totally without safety nets in the event that the venture fails. While even with NFEP support there were some cases where successful women's cage groups were forced off water bodies by powerful elites seeking to extract rent, there were also some extremely encouraging successes

### Box 5: Creating opportunities for poorer people

Breaking up the production cycle to provide opportunities for poor and/or landless people:

- Seed/fingerling suppliers in Lao PDR (AquaOutreach Project)
- Ensuring women are involved in aquaculture training

Supporting access to water bodies:

- In irrigation tanks (AFPRO & Gram Abyudaya Mandali in Adhra Pradesh)
- Pond lease or purchase (Caritas, Bangladesh)
- Gaining community consent for use of village ponds by poorest households (eg Aquaculture Outreach Project/RDC in Lao PDR)

Providing inputs - or co-ordinating with other projects

Collective management of aquatic resources and dry season refuges

The strategy of supporting model farmers and model villages has a long history in extension. However there are often difficulties with such an approach:

- Model farmers/villages may not be representative of the majority of poor people's circumstances. Recommendations generated by model farmers/villages may therefore be inappropriate
- In some circumstances the rich may be reluctant to learn from poorer households



Women are prominent in all aspects of aquatic resource management and aquaculture, but are particularly active in trading and selling fish and fish products. Photo: K. Vijaykumar.

However being able to learn from one's peers, and seeing successful practice has proved to be a very effective mechanism of extension.

There is also valuable experience of overcoming these difficulties, for example by organising extension activities inviting the whole village *en masse* to see what the poor pond farmers were doing.

### 3.2 Collective action

Collective action is a complex process that requires continuous consultation. Although this takes time the long-term benefits may be substantial. Collective action - whether based on class, occupation, or community - has often been advocated and widely adopted. For many NGOs, poor people organising themselves to secure access to and control over resources, and to represent their own interests are development objectives in themselves, rather than merely a means to an end.

There are many examples of supporting collective action of poor people in order to organise and share activities, and to better represent their own interests. Community management of water bodies has been applied in many situations, usually addressing one of the following:

- Establishing community rights to manage water bodies, with management committees, with locally agreed regulations governing access/extraction
- Establishing community managed reserve areas - such as important breeding and spawning grounds, for example deep pools in large rivers, and dry season refuges (see below)
- Supporting groups of poor people to lease water bodies
- Supporting community managed enhancement of water bodies

When using terms such as 'community' it is important to be wary of making assumptions that all those in the community have shared interests, and derive equal benefits from project interventions. Many of the poorer households, including women, may not be adequately represented in community meetings, and the most marginalised (often transient) poor may not be members of established communities.

Benefits of community activities may not be evenly distributed. For example, enhancement of water bodies may lead to greater competition over the resources and the displacement of poorer people. If poor people's fishing gear is not appropriate for catching stocked species, they will not derive any benefits and may even lose out.

Even where benefits of community management appear to be evenly distributed, if because of wider economic factors (such as debt, lack of economic options) poor people are forced to migrate during the fishing season, again they will not derive any benefits.

#### Box 7: Targeting women - experience from CAGES, Bangladesh

In 2001 some 62% of cage operators (total 6953) were woman. However this has increased from 43% in 1998, 58% in 1999, until we reached 62% in 2000 and also in 2001. The increase in woman's participation has been possible after it was shown by experience that cage culture fitted well with woman's traditional household activities. It is less appropriate for men since they often spend a considerable amount of time out with the homestead, and are less able to feed the fish - the most time consuming activity. However woman farmers made 24% less money than male operators (Tk. 918 compared to Tk. 1210 for men). So why should this be? (data from 1999).

1. The first point is that there are more extreme poor woman than male cage operators - almost double the number, and as shown above this has implications on their resources and ability to participate in high input high output systems. CAGES offers a wide range of different systems, the resources and opportunities of the farmer determining which system is recommended.
2. Secondly woman have for sale only 69% of the total fish stocked, while men have an average of 74%. The reasons for this are that woman farmers consume over twice as much fish in the household (9% compared to 4%). These fish are likely to be valuable sources of protein for these households, especially as cage culture provides fish during the monsoon season when household vulnerability is at it highest. Interestingly the percentage of total stocked fish available at harvest is the same for men and woman at 78%. This figure hides the fact that woman suffer from more poaching than men (1.4% compared to 0.6% for men), which is compensated for by woman having fewer mortalities during the culture period, probably due to the greater time woman have to feed and manage the cage.
3. Finally women earn less due to a lower price obtained at market. This is true of all species, and is representative of the fact it is not culturally acceptable for woman to sell their fish at market and therefore have an incomplete knowledge of fish price and are vulnerable to cheating by middlemen. Examples are known of sons cheating their mothers in this way.



## Box 8: Dry season refuge management - notes from the experience of the Aquaculture Outreach Project in Cambodia

- Sustainable aquatic resources management is important in lowland Cambodia
- Targeting the poor in rural areas through communal and common property resources are prime interventions. The pressure from donor agencies is usually to target the poor or 'poorest of the poor'. The pressure on local development agencies (local government, NGOs, etc.) is to demonstrate progress and successes
- Need to assess the aims and objectives of the collaborating agency
- Remit to oversee and direct the development of the aquatic resources sector, one objective is to address poverty
- Risk in addressing poverty since the possibility of not achieving success is perceived (rightly or wrongly) as being higher
- An important strategy is the management of dry-season refuges, with the main aim to increase the wild fish production
- A starting point was needed, and the obvious one to interest villagers was to "stock" the refuge with adult fish (increasing the number of broodstock)
- Frequent visits by government staff led to villagers coming up with own initiatives
- The focus was on technical interventions, little attention was paid to the issues of who stood to benefit or to lose, who was participating and who were driving the process
- After one year, the village was convinced. However, who was the 'village' had not been addressed, nor whether all had benefited, whether those not participating had benefited, or whether earlier fishers had made a net gain or loss.
- Subsequent reviews picked up on these points, followed by increased effort in assessing the distribution of the benefits. It was clear that this was possible since the 'technology' was working and produced successful results
- The process of learning how to target development to provide benefits to the poor often requires that the agent that is promoting this is 'credible', in the sense of producing tangible and visible results that generate clear successes
- The desire to improve on a success is natural and a positive way of introducing additional aspects of development work



Integration of mulberry and fish ponds in China. Photo: H. Zhang.



Often water resources are under-utilized due to lack of fingerlings for stocking. Photo: K. Pratt, Laos 1999.

### Box 9: Collective action strategies

There are many examples of collective action strategies including:

- Leasing water bodies
- Securing access to common water bodies
- Establishing community management regimes with locally devised rules and regulations governing access to fishing grounds, reserve areas, types of gear that can be used, how rents are collected, and how benefits are distributed
- Enhancement of communal water bodies, and establishment of locally devised rules and regulations
- Dry season refuge management
- Establishing farmer groups
- Supporting credit and savings groups

Organising groups takes considerable time. This is often underestimated in project planning, and as a result is often hurried with limited success. However, if properly approached, there are long-term benefits to supporting poor people to organise themselves

### 3.3 Providing Inputs

Poor people face considerable constraints to undertaking any new, risky venture with even low risk, and low-input technologies. The need to provide inputs to support the poor raises several issues.

- While credit may be necessary to assist poor people to take-up aquaculture, it may be beyond the skill and capacity of fisheries departments to supply credit themselves. Facilitating access to credit through more established credit-delivery institutions (including agricultural banks and NGOs) may be more appropriate
- Supplying inputs may create an artificial environment that suppresses farmer innovation, and that may not be sustainable once support is withdrawn. If inputs are to be supplied, farmers must be adequately prepared to cope on their own once this support is no longer available. (see notes from Cages Bangladesh below)
- Some form of cost recovery may also be necessary for the delivery institution. Farmers paying for services may generate a sense of ownership, and strengthen their capacity to make demands on service providers

For some of the most extremely poor people, the causes of their poverty may be so multi-faceted and deep-rooted with immediate pressing concerns of day-to-day survival that aquatic resource-based interventions may not be most appropriate. However, it is becoming increasingly evident that in many circumstances in Asia common aquatic resources are of fundamental importance for some of the most marginalised poor. Increasing differentiation and competition over common resources are often significant factors causing further marginalisation. Securing rights of access to and control over these types of aquatic resources for poor people, and establishing equitable management regimes, is therefore of fundamental importance.



Home grown fish are sold to provide a daily household income. Photo: K. Pratt, Laos 1999.

### Box 10: Providing subsidies - notes from CAGES Bangladesh

When the project subsidized feed inputs this inhibited farmer innovation. At this time the farmers did not want to give the fish large quantities of this relatively expensive feed, often leading to inadequate feeding. When the subsidy was withdrawn, farmers used a wide range of locally available feeds, thought about their resources and opportunities, which resulted in locally sustainable, more profitable aquaculture.

#### 4. How to understand context - household livelihood strategies

Understanding the local context of household livelihoods is not only necessary to ensure appropriate development strategies, but also as a basis for monitoring and evaluation, and a means of assessing potential for replication in other contexts.

Models of Sustainable Livelihoods and participatory approaches hold considerable potential but there are also difficulties. Most current experience of conducting livelihoods assessments so far has been as distinct studies, rather than being integrated to project planning and implementation. As such livelihood studies have tended to be time-consuming, and expensive. However this does not necessarily have to be the case. As livelihoods understandings are incorporated into project design, implementation and monitoring and evaluation, and the skills required to undertake these kinds of assessments are strengthened, these approaches will become more familiar and the methods more appropriate to local circumstances.

There are many different methods for understanding the context of poor people's livelihoods. Common to all is the need for effective communication and participation with beneficiaries. Terms such as 'participation' are now widely used, but often with very different meanings. In order to ensure that participation of beneficiaries is effective and meaningful, poor people need to have a stake in the decision making process. This means that poor people must be able to voice their interests, and at a stage in the planning process that allows for their input.

Very often participation is taken to mean a meeting at village level with little consideration of who attends, who is able to speak, the language that is used in the meeting, and whether there is any opportunity for participants to exert any real influence. While participatory methods such as PRA are widely advocated, the way in which they are implemented means that they are little more than public relations exercises designed to please donors, rather than to ensure effective participation.

It may not be absolutely necessary for everyone to participate in everything - as this can be inefficient and unwieldy. Skill and experience are required to determine when participation is appropriate. It is essential that the processes of participation, and the indicators for measuring the effectiveness of poor people's participation, are appropriate, clear and transparent.



*Although small ponds may not produce large quantities of fish, they are a valuable addition to a diversified livelihood. Photo: H. Wagner.*

#### Box 11: Lessons from adopting livelihoods approaches

Gaining a deeper understanding of poor people's livelihoods has had important contributions to many interventions. For example, the NGO Scale working in Cambodia applied the Sustainable Livelihoods analysis to assess how different poor people have different livelihood strategies, and how groups of poor may change. In some cases this may mean that having benefited from aquatic resource-based intervention to improve their livelihoods, such aquatic resource interventions are no longer the most appropriate to meet their current livelihood needs.

Aquatic resources are often one component of wider household livelihood strategies that adapt to changing conditions. Aquaculture may in some circumstances be a temporary or irregular strategy for coping with a production failure. Households may not engage in aquaculture all year, every year - but rather when they need to do so. The 'success' of aquaculture uptake must be assessed in the light of such adaptive household strategies. Supporting households' capacity to adapt to change and cope with crisis should itself be an objective of poverty alleviation.

Livelihoods approaches have also been useful in Monitoring & Evaluation exercises to assess who has been reached, what livelihood benefits have been realised, and the types of impacts on different groups within communities.

Livelihoods approaches have provided government and partners with deeper insights. However we must be wary of promoting the jargon and losing the essence. In many situations district workers are very much aware of poverty and livelihoods issues, and have an intuitive understanding of local livelihoods that should be developed. Although it must be acknowledged that in many other cases, government workers are often characterised by their lack of understanding of local livelihoods and poor communication skills.



*Cambodian woman drying fish during the season of plenty. Photo: G. Bizzari.*



*Cage culture can provide opportunities in water bodies, but typically need guarding against theft, which means changing lifestyles to live near the aquaculture operation. Photo: C. Boonjarus.*



*Small-scale value adding improves shelf life, this helps if market access is limited. Photo: J. Villamora.*



*In some countries, men may market fish products. Photo: G. Bizzari.*

## **Box 12: Fit and development initiatives in the aquatic resource**

One of the most important factors determining the extent to which the aquatic resources sector can be incorporated into current development initiatives is the objectives of individual households (regarding issues that include food security and income generation). Even assuming a case in which this sector has an established (by beneficiaries) role, it is typical that individual households have unique objectives in relation to how an activity serves them.

A family that cultures fish, for example, might resist a new practice that involves higher labour inputs while still wanting to maintain a portion of its income from the activity. Conversely, another household that has had relatively little prior involvement may newly envisage fish culture as an important opportunity and devote relatively more resources to it. These differences in outlook, which do occur within even narrowly defined target groups, must be respected in the sense that they are unambiguous determinants of how useful a particular activity will become.

Whether it be the selection of specific techniques (e.g. feeding strategy, spawning procedure) or aquaculture (sub)systems (e.g. seed production, nursing, other input supply, marketing), a closer fit of practices to household objectives is critical to realizing substantial and sustained benefits. Fitting interventions must be considered at the household level, not solely higher levels.

Generally, we have worked with aquatic resources projects that have represented major initiatives that will substantially engage a target group. That is, something that a group will devote at least a moderate amount of resources towards. Another perspective is aquatic resource activities as valuable temporary activities (coping strategies) that a family uses when faced with an event, which may render its usual livelihood strategies ineffectual. For example, we have seen families switch from fish culture to capture fisheries during seasons in which flood conditions are expected or experienced. An acceptance of this view of an aquatic resource activity as a type of relief response would necessitate that development organizations view their contributions and impacts in an extended way: one that also looks at interventions as temporary, albeit useful, solutions to disruptive events.

## 5. Institutions and policy processes - understanding context

Poor countries are often characterised by weak government institutions, and weak civil society institutions. Poorer people tend to have weaker access to these institutions and the services they provide.

Supporting institutions to be more responsive to the needs of poor people is essential in order to ensure that the deep-rooted causes of poverty are addressed, and that strategies adopted are sustainable.

There has been considerable effort towards institutional strengthening and capacity building. However this has not always been addressed with an understanding of poverty. The main thrust of institutional support has been in strengthening the technical capacity of fisheries departments. Very often this technical capacity has little to do with the requirements of working with poor people, and does not address the management skills and procedures that may be lacking.

In order to address issues of poverty alleviation, there is a greater need to understand the context in which institutions operate, and the relationships between government institutions, NGOs and civil society groups, poor people, and of course donors. As much as there is a need for understanding of the context of poor people's livelihoods, there is a need for a better understanding of the context of what institutions are, how they operate, and what they do. This requires the development of appropriate tools for institutional and policy analysis.

Institutions may operate according to diverse and competing interests and motivations, and according to contradictory policies. For example, fisheries departments may be involved in the promotion of export-oriented aquaculture that allow limited opportunities for poor people and may even have extremely negative impacts on the poor, while at the same time promoting small-scale poverty focused initiatives. The responsibilities of government departments may not always be clear, and there may even be conflict between competing departments. The relationship between central government and provincial and district authorities may also not be clear - even to those working within the institutions. This institutional context may place considerable pressures on those working within the institutions and as partners to projects. Without a working understanding of this context, no working strategy would be possible.

Most government institutions and individuals within the institutions have at least a rhetorical mandate of addressing poverty. While strategies adopted may not be clear, self-analysis may assist institutions to understand how they might be able to address poverty alleviation more

effectively. Before this can be done the institution may need a degree of capacity building to enable them to perform this self-analysis and to measure their impact on poverty.

It is also recognised that there may be reluctance on the part of partner institutions to work with the poorest groups. Very often performance of partner institutions is based on such criteria as increasing production, and even for NGOs disbursement of funds may be the criteria by which credit schemes are assessed. In many cases the poor may be seen as high risk, with little likelihood of success.

Institutions are often weak in very fundamental ways. For example, pay structures, job descriptions, terms of reference, reporting lines and promotion pathways are often unclear or determined by factors outside the normal institutional processes. These difficulties are often accentuated by project interventions that have no long-term vision or exit strategy, and that adopt competing pay scales and job descriptions. Rather than strengthening capacity this may in fact lead to a draining of capacity as key individuals are taken away from their institutional routines to work on project activities.



*Fishing, fish traps and fish culture all exist side by side in a Cambodian village on the Great Lake. Photo: G. Bizzarri.*

### 5.1 How can institutions be influenced to become poverty focused?

Influencing institutions needs to be a core, mainstream activity with a clearly devised strategy. There are a number of elements of such a strategy:

#### 5.1.1. Working with institutions

- Institutions need a vision of what they are, what they are trying to do, and who they are working with
- Sustained long term effort is necessary to effect any significant lasting change. It must be

appreciated that institutions are complex and take time to change

- Long term effort has implications for how donors support projects, and how donors co-ordinate efforts among themselves
- Change must be built on success. This is as true at the local level working with intended beneficiaries, as for working with all levels of partner institutions
- Small pilot activities are a good way to demonstrate what is needed or what could be done. This could be subsequently institutionalized. “Institutional experiments” (not just field trials farmer trials), declare the intention of what is being attempted with an institution and emphasize that it is an experimental, learning process
- Capacity building needs to be based on a thorough understand of the institution from the start - the types of capacity that exist, institutional structures and processes, and the needs for strengthened capacity
- In order to build capacity the counterpart must be appreciated as a partner not as a recipient. This is easier to achieve when the project’s role is that of facilitator
- Personal relationships and rapport must be built up between leaders of institutions and government/ higher level administration. In order to do this it is important to network
- A well-planned exit strategy must be developed well before a project closes. No intervention should begin without a clear strategy for how it will end, and how the project will withdraw. However, this is again is often undermined by short-term funding

::::The context of supporting capacity building varies considerable. Some thoughts on the experience of the Department of Fisheries in Bangladesh are presented in Box 13.

Working at different levels of government institutions requires modifications to approaches. The capabilities, responsibilities and needs of central government versus provincial and district are very different. In particular it is at the provincial and district levels that extension work is planned and implemented and that there is most direct contact with poor people. However, it is at these levels that skills and resources (even such as basic administration, and budgets for petrol for travel) are most limited and

most under strain. These strains may be exacerbated by projects too intent on following their own agendas rather than building partnerships, and ensuring long-term institutional sustainability.

### **Box 13: Supporting extension services in fisheries departments**

Development of a well targeted, well planned, cost-effective, demand led, Department of Fisheries’ extension service is vital. Weak management structures within DoF and not technical aquaculture knowledge of extension agents/departmental staff is now the key constraint to a successful extension service.

Government extension services must be based on full participation of primary stakeholders (beneficiaries). The source of funds for these extension services must be defined (public/private/ NGO/Donor/) and ideally include a component of cost recovery to ensure quality control and accountability.

It should have the capacity to target (along with partners) specific geographic areas and social groups. Vulnerability indicators can be used to monitor outcome -such as access to food in lean season, number of months food insecure, nutritional status, access to and quality of housing, literacy, health status, community involvement, social mobility.

A summary of lessons learned from many years working at provincial and district level in Lao PDR are presented in Box 14.

#### **5.1.2. Poor people’s participation in policy and improved understandings of poverty and aquatic resources**

Poverty alleviation requires poor people gaining access to and control over their resource base - not merely their natural resource base but also over political resources and policy-making processes. One of the main reasons that poverty and the importance of aquatic resources in poor people’s livelihoods have been neglected has been that poor people have been excluded from policy-making processes, and have limited rights and capabilities in expressing their interests. The capacity of poor people to organise themselves and represent their own interests must also be addressed.

Policy makers and development institutions must be more aware of poverty alleviation strategies, poor people’s livelihoods, and the importance of aquatic resources in rural livelihoods. Advocacy work, including lobbying decision-makers, and improving direct contact between decision-makers and poor people (for example through field visits) is effective and necessary.

## **Box 14: Working with local development institutions - lessons learned**

- **Develop a poverty focus within institutions rather an exclusion zone**

Provincial and district development institutions often have a wider remit than just the poor and they may have difficulty in focusing the majority of their resources on just the poorer groups. This may be dictated by Central Government policy, but it is also generally more difficult and costly to work with the poor and the personal benefits to staff are often less rewarding than working with more privileged target groups. When international development agencies work with local institutions as partners, it is often not practically possible to exclusively work with “the poor”. It is however often possible to emphasis poverty related issues and gradually redirect an institutions’ intervention focus. Even if institutions are able and willing to exclusively work with the poor, a gradual movement of focus will still be required in order for individuals to gain experience and confidence in working more on poverty-related issues.

- **Developing a sustainable poverty focus requires institutional success.**

A progressive and efficient provincial/district level development institution should have a portfolio of development interventions that are continually being modified and updated. The interventions will likely be in different stages of development, tested in some areas and not others and will not always work. Partnerships with international development agencies should seek to develop the portfolio, not a specific intervention and aim to create development successes that gradually refine the focus of the institutions’ portfolio. The options available for generating successful interventions will at first generally not target only the poorest groups. However, an early success is required if local development institutions are to develop a sustainable poverty focus.

- **Measure the process of institutional change**

Possibly the best way of measuring how effective institutions are in working with the poor is to monitor poor communities and measure changes in their livelihood status. Often there are considerable pressures from donor agencies placed on local institutional partners to demonstrate their poverty focus at the community/household level. However, this is often difficult for local development institutions especially when beginning to develop a sustainable poverty focus. Like other aspects of rural development, appropriate strategies for monitoring and evaluation (M&E) have to be gradually developed and donor agencies should resist the temptation to impose externally developed M&E frameworks. Helping local institutions to more effectively target the poor not only requires appropriate interventions (social and/or technical), but also usually requires a considerable modification to the way things are done. This ranges from the methods used to train extension workers to methods of financial accounting. Monitoring how an institution works can say a great deal about what it is doing. Good institutional process indicators are also relatively easy to brainstorm and cost-effective to monitor.

- **Developing a poverty focus requires a long-term perspective**

Poverty focused development initiatives with two or three year funding horizons create an environment in which it is often very difficult to promote sustainable institutional change. Changes in the orientation and functionality of provincial/district development institutions require a long-term perspective as institutions change slowly and changes are often highly political. Developing strategies for an institution to improve the way it works with the poor often requires key individuals within that institution to reinterpret Central Government policy, re-orientate an institution’s traditional focus or substantially modify established operational procedures. While such changes are often possible if managed correctly, they almost inevitably involve a considerable degree of political risk, especially for those individuals working at provincial/district level. Such individuals are unlikely to commit themselves to undertake substantial institutional changes if donor commitment is uncertain or likely to be short-term.

- **Build on existing systems, create ownership**

Improved institutional systems or procedures require a high degree of local ownership if they are to be sustainably adopted. In most cases there are always established ways of doing things, but these may be informal and undocumented. It is important to study these and as far as possible develop new systems out of the old ones. It is important that new systems provide institutions with new ways of delegating authority. Often local development managers are unwilling to delegate authority simply because they have no reliable system of monitoring.

It is also important to strengthen poor people's capacity to organise, and to learn effectively from each other's experience. This should be regarded as both a means of ensuring more effective development, but also as a development end in itself.

There is still a need for a variety of data and evidence that demonstrate the importance of aquatic resources in poor people's livelihoods. However, this must be generated in such a way as to meet the needs of policy-makers, and to enhance the role of poor people in policy-making processes. Effective poverty-focused policy does not merely rely on availability of data, but on an open and transparent policy-making arena in which poor people are able to represent their interests authoritatively.

### **5.1.3. Promoting partnerships - government, NGOs and civil society**

Current understandings of poor people's livelihoods and poverty alleviation illustrate the need for an integrated approach to address a range of interrelated dimensions of poverty. In order to make institutions more effective and responsive to poor people's needs it is essential to promote partnerships between government, NGOs and civil society institutions.

When promoting these kinds of partnerships it is important to consider the following:

- NGOs, government, private sector and civil society institutions have different levels of poverty focus due to differing agendas and differing areas of activity. The specific context of each needs to be understood
- Agendas may be quite different even though objectives are the same
- There are may be difficulties in getting government and NGOs to have dialogue in some situations (again this is context specific)
- It is important to assist government, NGOs and civil society groups to understand each others' respective strengths and the benefits of working together
- Two way learning and open transparent approach is essential
- Ensure workshops have representations from NGOs and governments

### **5.1.4. The role of donors**

Donors also have an important role to play in influencing policy, and in ensuring effective co-ordination when working with partner institutions.

Donor pressure is a strong influence on policy making processes. The recent donor emphasis on good governance and decentralisation should also create opportunities for policy dialogue. Supporting responsive government institutions, and securing poor people's access to and control over aquatic resources should also be seen by donors as governance issues.

Co-ordination of donor activities is also essential. Competing donor priorities and conflicting poverty alleviation strategies risks undermining progress in institutional strengthening. We should recognize that donors will not do this themselves - the institution must be in a position whereby it can foster this cooperation and coordination.

#### **Box 15: Supporting communities to learn from each other - lessons learned**

- Language is a big hindrance to communities learning from each other, but this can be helped overcome by PLA visualisation tools that encourages communities to share their experiences and views; this process needs experienced community workers and translators
- Community leaders are not the poorest of the poor, but their experience in community work, willingness and dedication helps ensure the interests/perspective of the poor are represented and that lessons learned are applied widely in their communities
- As much as possible, community leaders who are literate should be asked to document their reflections (analysis of strategies observed) in writing or drawings.
- Invest in lots of preparation in terms of participants and facilitators understanding the learning framework - agree on what we mean by "lesson", use of modelling - that demonstrates cause and effect relationships and simple "facilitating/hindering factors" analysis to draw out lessons



## 6. Conclusion

The main lessons learned from the Expert Consultation can be summarised as follows:

- Understanding the context - of poor people's livelihoods, as well as institutional and policy making processes is essential
- Targeting - in an inclusive manner - is essential to ensure that benefits reach poor people, and that strategies are appropriate to poor people's circumstances
- Effective participation of poor people and project partners is essential, both as a means to an end and as an end in itself
- Aquaculture and aquatic resource management strategies may not in themselves be sufficient to address all the needs of poor people, but can be important components of wider, cross-sectoral interventions
- This requires more effective co-ordination, with innovative partnerships
- Supporting poor people to organise effectively to exert influence on development planning and policy making processes, to secure rights of access to and control over aquatic resources, and to share and learn from each other's experience
- Supporting institutions to be more responsive to the needs of poor people is essential in order to ensure that the deep-rooted causes of poverty are addressed, and that strategies adopted are sustainable

The Expert consultation produced a summarized list of what it considered to be successful strategies for aquaculture development and the reasons behind this success, the results of which are presented in Box 16.

### **Box 16: Summary conclusions of what makes successful poverty focussed aquaculture interventions**

#### **What works?**

- Process projects
- Ensure ownership through participatory approaches
- Process of finding out what people need and want in relation to what projects can offer - based on immersion within the community and spending time with farmers
- Starting small, with low levels of risk - mistakes have no big implication
- Participatory technology development, utilising local/indigenous knowledge

#### **Why does it work?**

- Beneficiaries can set their own criteria and indicators of success
- Allows for revision of targets goals, and adjustment of strategies and activities
- Answers local needs rather than externally driven solutions
- Automatically generates interest
- Creates a more thorough understanding of development objectives and appropriate strategies
- Manageable for local groups - but must provide tangible livelihood benefits
- Builds confidence and learn from experience
- Using local knowledge and resources produces locally appropriate strategies, increases ownership of the results and often develops a long-term view

## What works?

- Demand-led, farmer first, people centred approaches
- Extension of appropriate technologies (for example, hapa spawning hapa nursing)
- Low food chain, low cost and marketed at small size species
- Breaking up the production cycle, deliberately identify opportunities for poor landless people to become involved in parts of this.
- Transparency and involvement in decision making
- Target all the household members
- Technologies have to be developed according to the local context
- Farmer field schools
- Networking /partnerships exposure trips
- Farmer to farmer visits
- Projects endorsed by respected persons (royal projects), but follows other preceding principles
- Monitoring and evaluation should involve participatory process that can identify qualitative aspects - including local people's indicators of success
- Good staff facilitators
- Targeted, limited subsidies
- Supporting local fry traders as extension workers

## Why does it work?

- This develops strategies that are appropriate to local context and poor people's needs
- Low cost, low risk - very appropriate for poorer groups such as women
- Consumed within the household (whereas high value species are more likely to be sold)
- Creates opportunities for groups that would otherwise not be able to derive direct benefits from aquaculture
- Generates sense of ownership
- All have something to offer, and potential benefits to gain
- Women and girl children may otherwise be denied access to benefits
- Integration of aquaculture and aquatic resource interventions for the poor where they are integrated with agriculture are better. i.e must be part of the larger livelihood system
- Adoption is often quicker than if aquaculture is used as an individual intervention
- Farmers given opportunity to discover and learn processes rather than be told facts
- This enables them to make decisions from a position of knowledge
- May be costly and difficult to establish, however there can be considerable benefits
- Relate well to each other
- Use farmers to train other farmers
- Motivates people and ensures full effort from local people
- Ensures that projects meet the needs of intended beneficiaries
- Allows poor people to critically assess strategies and outcomes
- Maximises communication, experience sharing group strengthening
- Some form of subsidy may be appropriate, particularly for the poorer farmers, but there must be some form of contribution from the target beneficiary
- Fry traders and seed producers have the greatest incentives to transmit information and skills to their clients.

## Box 17: The summary conclusions of what makes unsuccessful poverty focussed aquaculture interventions

### What does not work?

- Inappropriate subsidies and training allowances
- Large centralised hatcheries
- Technology led interventions
- Overseas training for extension staff
- Top down management planning, extension etc.
- Targeting only the poorest
- Projects themselves should not provide credit
- Short term projects

### Why does it not work?

- Subsidies can suppress farmer innovation, creating artificial environment for production, that may not be viable once subsidies are no longer available
- If farmers are providing their own inputs they make more careful decisions
- Do not reach remote areas too expensive and often fail after withdrawal of support
- Opportunities for poor people to become involved in hatchery production and trade are denied
- Mostly technologies already developed were not targeted at the poor and adoption is low
- Poor design & inappropriate curricula
- Not cost effective
- Trained staff may leave the sector (although capacity developed may be useful in other aspects of work)
- Out of touch with local circumstances and local needs
- Leads to jealousy and problems with patron client relationships
- Maybe we want to do this? Social capital and networking is damaged
- NGO in a series of villages and targeted only the poorest - when they left the poor who had been targeted had lost access to the patrons that they had previously relied upon
- Causes problems and is inefficient. The project should seek to work through existing finance structures. Project should facilitate access
- Might be possible provided there are distinct separations between the roles - i.e. a specific person for the credit - but there may still be some confusion
- Insufficient time for learning
- Slow reaction time means results often only occur after project closure

## Appendix 1: Participants at the consultation

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## **Appendix 2: Papers Presented**

### **Qazi Khaze Alam**

*Proshika Experience on Small-scale Aquaculture & Aquatic Resource Management on Poverty Alleviation in Bangladesh*

### **Ka Ming Au**

*Experience of SCALE Using the Sustainable Livelihoods Framework*

### **Anwara Begum & Marcel D'Costa**

*Small-scale aquaculture and aquatic resource management on poverty alleviation in Bangladesh: A Caritas participatory approach*

### **David Brown**

*The impact of fisheries extension and training on the livelihoods of the poor in Bangladesh*

### **Greg Chapman**

*Fit and Development Initiatives in the Aquatic Resources Sector*

### **Don Griffiths**

*Poverty and livelihoods: Field experiences from Bangladesh, Cambodia and Viet Nam (Regional)*

### **Hans Guttman**

*Learning How to Target the Poor*

### **Nick Innes-Taylor**

*Helping Local Development Institutions Target the Poor More Effectively*

### **Kenny McAndrew**

*Cage Culture - Targeting Woman and the Extreme Poor*

### **Eric Meusch**

*Notes on Effective Targeting of Poor People*

### **C. M. Muralidharan**

*Aquaculture Interventions to Benefit the Poor*

### **Tabrez Nasar**

*Poverty focused small-Scale aquaculture: Implications for Strategy*

### **Mark Prein**

*Resource Analysis for Targeting and Addressing the Needs of Poor People: Experiences from an Action Research Project on Small-Scale Aquaculture in the Uplands of Quirino Province*

### **Ronet Santos**

*Sharing of learning amongst the poor*

### **Severino Salmo**

*Linking Small-scale Aquaculture and Coastal Resources Management: A Strategy for Alleviating Poverty*

### **Bikash Chand Shrestha**

*Regional consultation on focusing small-scale aquaculture and aquatic resources management on poverty alleviation*

### **Cherdsak Virapat**

*Strategic Management Approach to the Village Fish Pond Program (VFP) in Alleviating Rural Poverty in Thailand*