



Global Conference on Aquaculture 2010

Farming the waters for People and Food

22-25 September 2010, Phuket, Thailand

Disclaimer

This is an unedited presentation given at the Global Conference on Aquaculture 2010. The Organising Committee do not guarantee the accuracy or authenticity of the contents.

Citations

Please use the following citation sequence with citing this document:

1. Author.
2. Title.
3. Presented at the Global Conference on Aquaculture 22-25 September 2010, Phuket, Thailand.



**Global Conference
on
Aquaculture 2010**

Expert Panel Presentation V1.2:
Alleviating poverty through aquaculture:
progress, opportunities, and
improvements

**By
Dr. David Little**

22–25 September 2010, Phuket, Thailand



Outline of the presentation

- changes in development thinking
- nature(s) of aquaculture
- What do we mean by poverty, vulnerability and well-being?
- food security....aquatic food security
- progress, opportunities, drivers

Changes in development thinking

- Malaise in donor support-4% of development support to agriculture-75% of global poor in rural areas
- WDR (2008) agriculture focus—development *through agriculture*
 - Agriculture, transforming and urban countries
 - Most aquaculture promotion in *transforming countries*

Other influences on development thinking

- Post-Washington Consensus
- Climate change
- Global Food Shock (2008)
- Private sector development (PSD)-
'Changing the face of the waters'(World Bank)
- Moving away from a default 'small-farmer first' approach?

Revisiting definitions of aquaculture

- Do definitions support interpretation of *poverty* impacts?
- Multiple typologies (location, technology, species, trophic level)
- Rural:urban
- Traditional:modern
- Scale-'small' or 'large'

Using scale-or relationships of production?

- 'Large' or 'small' –scale
- Peoples' roles in the systems i.e. owners, managers, labourers etc
- Full-time/part-time, year-round/seasonal
- Difficulties in understanding status e.g. Pangasius in Vietnam, Shrimp in Thailand
- inadequate sampling frameworks
- Quasi-peasant', 'quasi-capitalist' and capitalist

Relations of production

| Relations of production | Characteristics | | | | | |
|----------------------------|-----------------------------------------------------|------------------------------------------|-----------------------------|--------------------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------|
| | Quasi-Peasant | | Quasi-capitalist | | Capitalist | |
| Production intensity | Low | Low/moderate | Moderate | Moderate/intensive | Moderate/intensive | Highly intensive |
| Capital & operating costs | Limited | Moderate | | Substantial | High | Very high |
| Ownership & labour | Family owned & operated | Family owned & operated | Family owned & operated | Family owned & operated or absentee owner | Family owned & operated or absentee owner | Absentee owner or corporate ownership |
| | | | | Part-time &/or permanent labour | Permanent labour | Permanent labour |
| Organisation of production | Minor activity in a portfolio of livelihood options | One of a portfolio of livelihood options | Primary livelihood activity | Primary livelihood activity or entrepreneurial investment activity | Managerial staff | Professionalised managerial, technical & clerical staff |
| | | | | | Possible or partial or complete vertical integration | Likely partial or complete vertical integration |
| Market orientation | Subsistence/local/district | | District/urban/national | | National/export | |

After Belton et al

Rural: Urban

- Rural and urban-
 - definitions
 - Linkages
- e.g. growing of water spinach in Beung Cheng Ek, Phnom Penh
- Estimated 50% of green vegetables in the city
- Migrant labour from provinces
- Context specific



Peri-urban aquatic vegetable production and marketing



farm gate to the value chain

Improved seed and feed greatly increase opportunities for poor people



Evolving forms of aquaculture

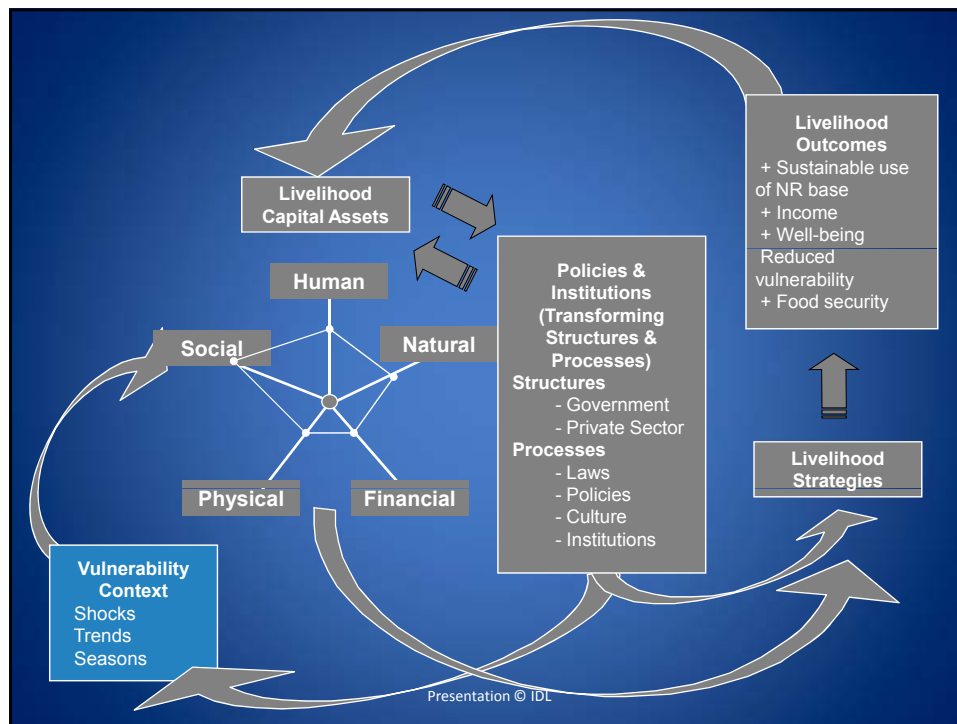
- Household enterprises remain core
- Common pool resources
 - Leasing
 - Cages
- Implications for access of the poor to traditional natural sources
 - Elite capture?
 - Benefits through employment and value chain?
- Extensive-stocked and unstocked species



'Community'-level

- Can ponds based on community management 'work'
- Smaller, more homogeneous groups work best
- Multiple use, multiple conflicts
- Sustainable stocking





Poverty and vulnerability

- Poverty or well-being or life satisfaction
- Away from simplistic \$1/day to multiple natures of poverty
- Dynamic - falling into and escaping from poverty
- Impacts on poverty of involvement in or exclusion from aquaculture
- Evidence for role in reducing vulnerability or supporting 'escape' from poverty
- Uncertainty
- Vulnerability-intra-household and ex-household

Poverty dynamics

- Chronic or transitory poor (Hulme and Shepard, 2003)
- Stages of progress approach (Krishna, 2007)
- Cumulative ill-health often trigger into decline
- Can involvement in aquaculture 'protect' ?
- Intergenerational impacts

Escaping poverty

- Income diversification
- Access to irrigation-different for marginal rain-fed v high potential contexts
- Investments in irrigation were sometimes a turning point to decline
- Investments in fishponds?

Targeting

- Reasons for falling into and climbing out of poverty need to be understood
- Aquaculture as a means of improving wellbeing of poor or as a mechanism to support escape?
- Poorest areas or locations with the greatest number of poor?
- Identifying poorest communities or households within communities for support?

Do the poor have access?

- In Bangladesh , poorest have no land but ponds *may* support poorest *farmers* falling into poverty
- Advocacy and support to access water resources
- In many contexts elsewhere even the poor can access ponds but does this support escape from poverty? How?
- What type of interventions work best?

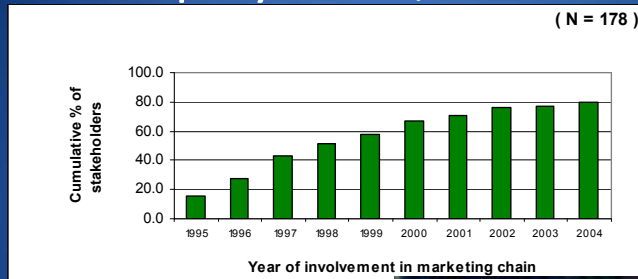
Interventions

- Has targeting 'quasi-peasant' failed in terms of livelihood transformation?
- Realignment towards 'small and medium enterprise' suggested for both Africa (eg Brummett et al) and Asia (Edwards)
- As for agriculture generally, more commercial aquaculture generate more employment for poor

How are the poor involved?

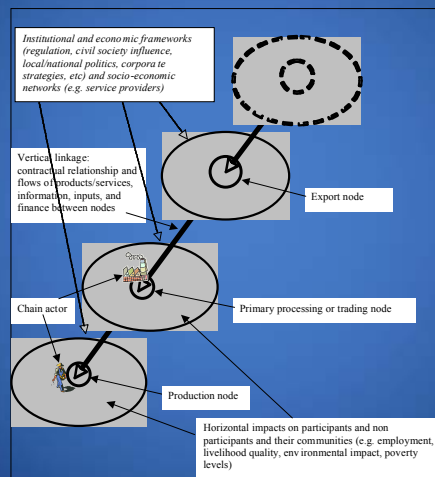


Growth in market-chain employment , (Faruque, 2007)



Value chains

vertical linkages and horizontal elements (Bolwig et al, 2010)



How are livelihoods impacted?

- Level
 - Households
 - Community
 - Sub-district
- Roles
 - Producers
 - Intermediaries:
 - Consumers



Poverty and resilience

- Risk and vulnerability
 - risk -likelihood of a specific shock (e.g. flood)
 - vulnerability – sensitivity (e.g. food price hike) and resilience (capacity to respond positively)
- Social responses-adaptive management
- Resilient aquaculture –capacity to change –
- How is this different among better off and poor in aquaculture value chains?
- Supporting poorer people-e.g. fry trader training, facilitating CBOs, aquaclubs

Dis-benefits to participants and broader community

- Variable capacity to respond- 'asset thresholds' the poor have least capacity to respond
- Conflicts and environmental impacts
- Livelihood of 'the last resort'?

Broader and indirect impacts

- Reducing prices for poor consumers
- Where poor consumers are numerous greater impact on food security than promoting quasi-peasant aquaculture?

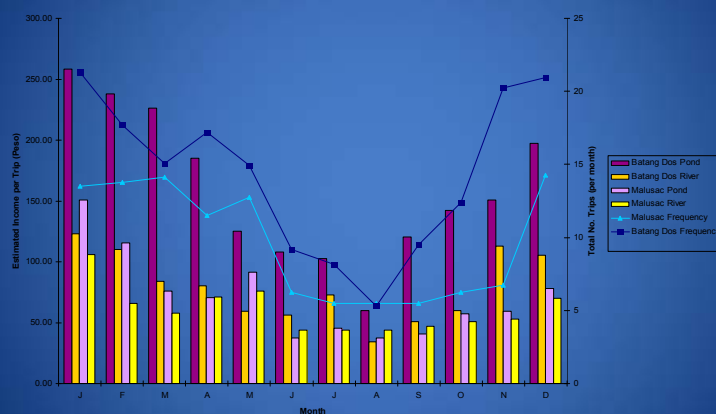


Well-being

- Not just about cash, or not about cash at all
- Motivations for adoption and retention multi-factorial (Haque et al, 2010)
- Social, nutritional benefits
- Seasonality

Income-per trip

Pond gleaners in 2 Pampanga communities Philippines



Lean period – PhP 134 (£1.60) trip⁻¹ PhP 1,130 (£13.14) month⁻¹

Peak period – PhP 237 (£2.76) trip⁻¹ PhP 3,680 (£42.80) month⁻¹

Parker, 2008

Food security

- “all people, at all times, having physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life” (FAO 1996).
- Confused with self sufficiency and food sovereignty
- Ill-health related to micronutrient insecurity more important than ‘hunger’ in meeting MDGs (Shetty, 2009)
- Key to escaping poverty trap-positive feedback impacts

Farmed fish instead of wild-dietary impacts

- More lipid in farmed fish
- Poorer lipid profiles
- Other micronutrients-consider *who* and *how* fish consumed
- Consider broader diet
- Changing risks from FBTs, contaminants
- Changing value of farmed v wild

Promoting aquaculture to improve nutrition

- How food insecure are farming households (Belton et al) ?
- Poorer households in 3 sites in SE Asia were relatively *more* dependent on AA from their own systems (when all sources considered; Morales, 2007)
- Trend towards increased dependence on small farmed fish by the very poor
- Farmed AA becoming part of 'coping strategies' of poorer producers and consumers

Other issues

- Methodological issues
- Broader aspects-on-farm water storage and impacts on non-fish food production
- Improved nutritional outcomes of the more vulnerable *within* households



Drivers of change

- Local v global trade
- Urban market pull major driver
- Changing demographics and settlement patters; broader immanent development
- Cuisine shifts
- Intra-regional trade
- Technology development

Technology change-impacts on the poor in aquaculture value chains

- A *lack* of technology may protect more marginal actors (e.g. grouper fisher-farmers)
- In general technology developments have increased livelihood opportunities hugely
- Very clear in fish and shrimp seed production and marketing chains
- Poorer people have niche producer roles (e.g. nursing)-maybe small-scale and seasonal
- Good evidence for spontaneous adaptive management

Hanging in, stepping out (Dorward, 2010)

- Vulnerability of poorer actors in value chains
- Power within the chain; alternative choices-eg pangasius (Loc et al, 2010)
- Enhancing resilience through
 - Diversification of farm and/or broader livelihood
 - Cooperation
- Policy changes-land tenure, taxes on, and regulation of the quality of, feed imports

Transformative v incremental impacts on poverty

- 'Quasi-capitalist' and 'capitalist' aquaculture
- Different models-single corporate entity to clusters of SMES
- Domestic and export market orientation
- Increasing barriers to the poor-rise of private regulatory systems
- Larger corporate operations are advantaged

Incremental benefits

- Most 'quasi-peasant' < 10% total household income but...
- Numerous other benefits especially in water-limited, marginal agricultural systems
- Most poor small-holders remain dependent on agriculture and on-farm water storage critical to enhance resilience
- Decline in entry and maintenance costs
- Continued coexistence of 'quasi-peasant and quasi capitalist'

Moving forward

- 'Quasi-capitalist' is more likely to transform more poor livelihoods than 'quasi-peasant' , mainly through enhancing employment opportunities
- Focus on rapidly growing urban domestic markets rather than risky export markets has had most impact, but examples especially catfish and shrimp of the latter also being transforming
- Transforming livelihoods-need better understanding of trade offs

Impacts

- Need a strategic approach if aquaculture is to impact on poverty most cost-effectively as many examples of relative failure and (unexpected) success based on modest investment
- Targeting to support adaptive capacity throughout the value chain focusing on poor actors and vacant niches (e.g. under-utilised rain-fed systems)

Acknowledgements

- Thanks to all panel members who contributed inputs and source materials
- Questions to the panel?