



European Fisheries Development Advisors Network (EFDAN) – Meeting

21-22 May 2014

Dr Christophe Béné
Institute of Development Studies,
UK

**Fisheries and aquaculture and their
potential roles in development: an
assessment of the current evidence**



Prepared by



June 2013

commissioned by UK-DFID



Protocol and Methodology

“Assessment of the evidence”

- Existing (peer-reviewed) literature
 - +12,000  202 articles
- 17 pathways to development (“clusters”)
- Evaluation of the body of evidence
 - quality (validity, rigorousness, reliability)
 - size (number of articles)
 - consistency of the evidence
- Scoring (example)

| Quality | Size | Consistency |
|---------|-------|--------------|
| High | Large | Inconsistent |

Fish and nutrition

| Quality | Size | Consistency |
|---------|-------|-------------|
| High | Large | Consistent |

- “Fish contribute to nutritional security”
 - Large, rigorous, consistent body of evidence
- Confirms **high nutritional value** of fish
- Confirm the potential effective contribution that fish can offer to **address multiple micronutrient deficiencies** in developing countries
- Some caveats
 - Fish not part of the nutritional debate
 - Fish too often ‘reduced’ to protein
 - Gap in our knowledge



Fish and health

| Quality | Size | Consistency |
|---------|-------|-------------|
| High | Large | Consistent |

- “Fish is generally good for health”
 - Large, rigorous, consistent body of evidence
- confirms fish consumption does provide **protective effects** on a wide range of **health** issues, including incidence of stroke, high blood pressure, coronary heart disease, and possibly cancer
- Caveats
 - Risks of contaminants are still persistent
 - Gap in our knowledge



Health risks associated with fishing activities



| Quality | Size | Consistency |
|---------|-------|-------------|
| High | Large | Consistent |

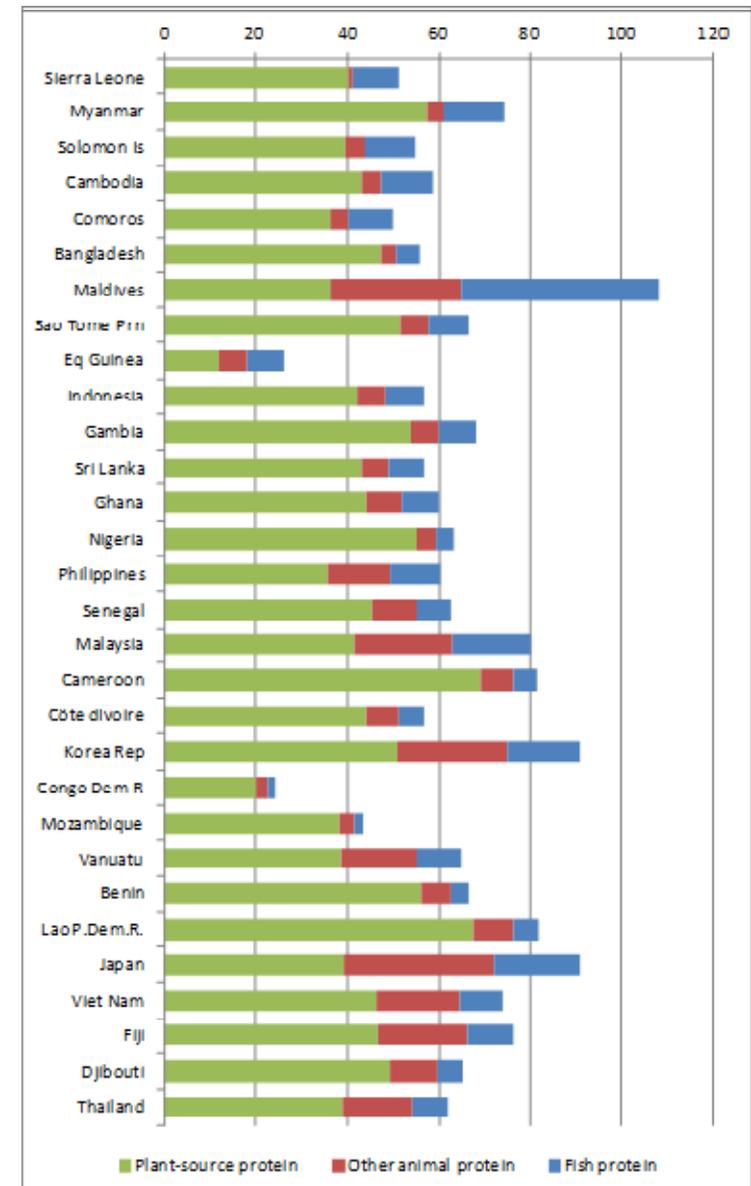
- Fishing is one of the most dangerous economic occupations
 - Based on developed countries statistics
 - Situation even more serious in developing countries
- Beyond accidents at sea...
 - Prevalence of malaria, waterborne diseases, STDs, HIV/AIDS
 - Drug, alcohol



Fish consumption and the poor

| Quality | Size | Consistency |
|---------|-------|--------------|
| High | Large | Inconsistent |

- “Fish as rich food for the poor”
 - 1.5 billion with 20% of their animal protein intake
 - Essentially in developing countries
- Fish is not the main source of protein (especially for the poor)
- Price is expected to continue increasing

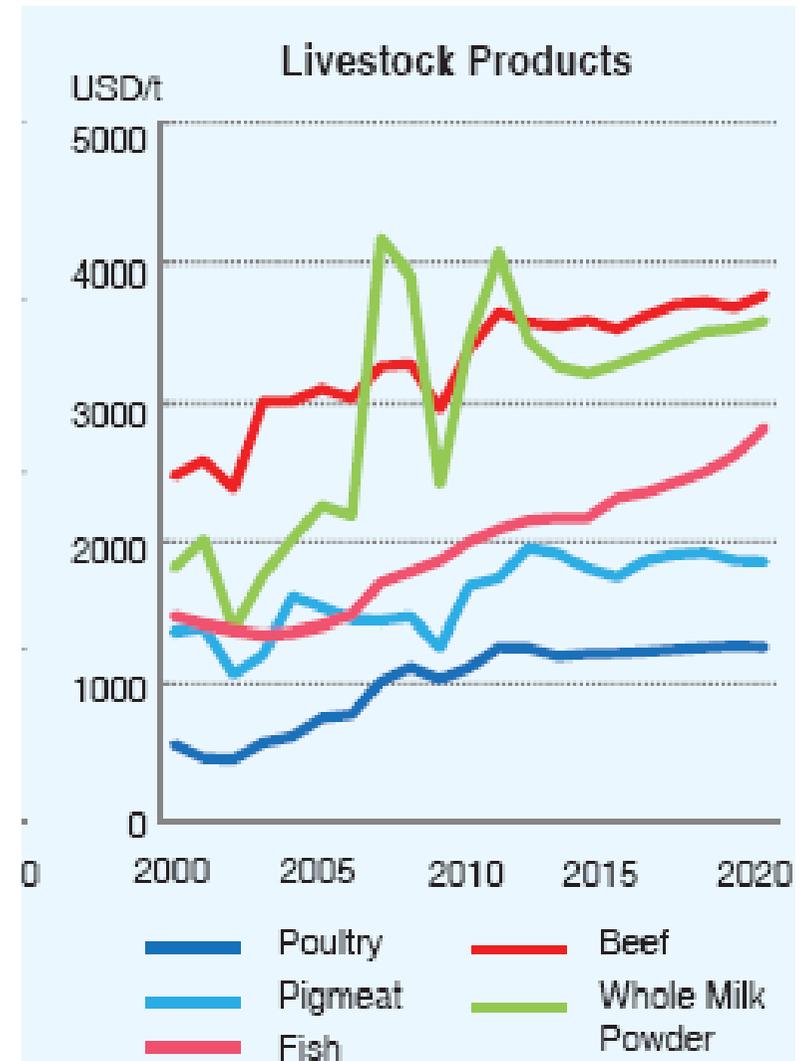




Fish consumption and the poor

| Quality | Size | Consistency |
|---------|-------|--------------|
| High | Large | Inconsistent |

- “Fish as rich food for the poor”
 - 1.5 billion with 20% of their animal protein intake
 - Essentially in developing countries
- Fish is not the main source of protein (especially for the poor)
- Price is expected to continue increasing





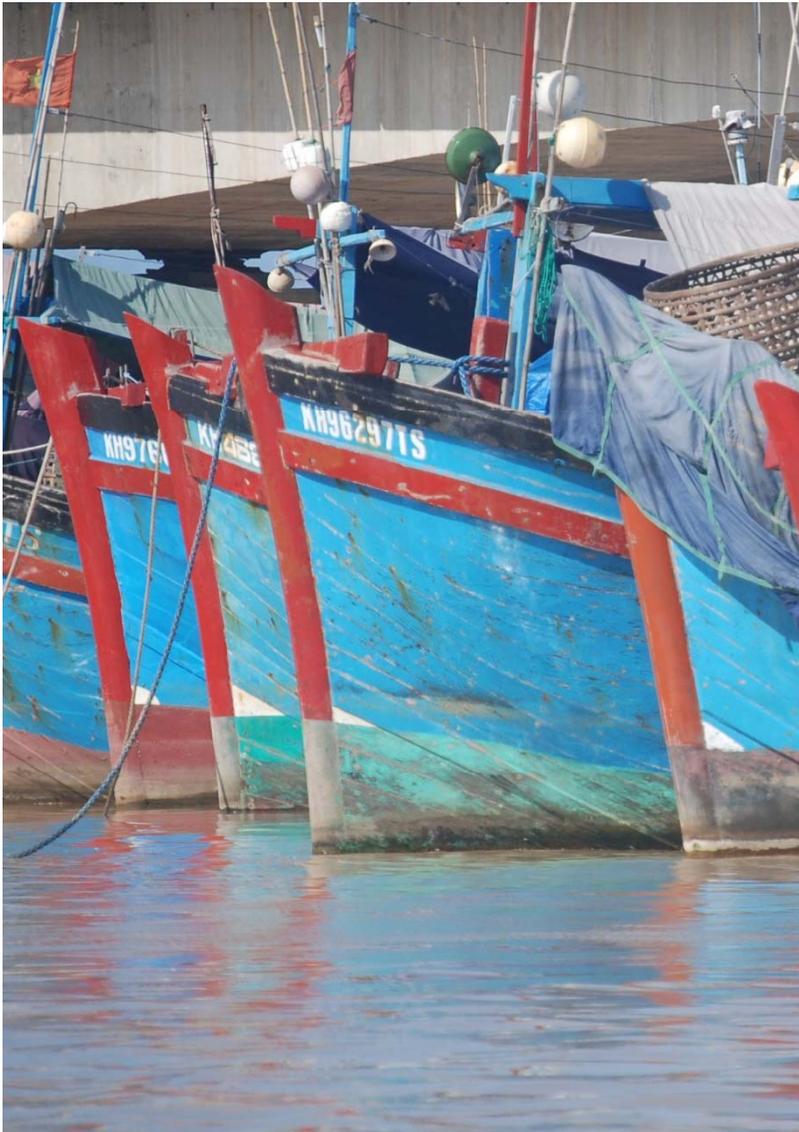
International fish trade and food security



| Quality | Size | Consistency |
|----------|--------|--------------|
| Moderate | Medium | Inconsistent |

- Unsettled debate between two ‘views’
 - Theory: revenues generated through trade should improve the ability of the countries to import food.
 - “exported fish are fish that are not eaten locally”
- Inconsistent results, reflecting the lack of tangible evidence
 - No doubt that fish trade generate revenues.
 - No systematic positive benefits in terms of food security

Fisheries and economic development



| Quality | Size | Consistency |
|---------|-------|--------------|
| Low | Large | Inconsistent |

- Empirical evidence is weak/inconsistent
 - Statements are rarely rigorously substantiated
 - Lack of appropriate national statistics and data on multiplier effects
- Unclear how changes in increase efficiency and increase rents, including national certification schemes, actually benefit the poor
 - In contrary, more labour intensive have positive effects (labour buffer).
 - Lack of global analysis

Fisheries and household economy



| Quality | Size | Consistency |
|----------|-------|-------------|
| Moderate | Large | Consistent |

- Fisheries and poverty: complex and contrasted picture.
 - Fishers are not always among the “the poorest of the poor” .
 - When present, poverty can be both cause and consequence of resource degradation
 - Main sources of poverty beyond the simplistic narrative around the tragedy of the open access
- General consensus about the important social and cultural functions of fisheries

Aquaculture and economic development



| Quality | Size | Consistency |
|----------|--------|--------------|
| Moderate | Medium | Inconsistent |

- Debate (around size/scale) is not new but still very much unsettled
 - Small-scale operations have been important in the successful expansion of aquaculture in Asia
 - Not in Africa
 - Shift of paradigm towards larger (medium-size) commercial aquaculture
- Larger scale enterprises part of the Asia success
 - Generate huge revenues and forex earnings
 - No tangible evidence/data to substantiate the expected trickle-down

Aquaculture and household livelihood

| Quality | Size | Consistency |
|----------|-------|-------------|
| Moderate | Large | Mixed |

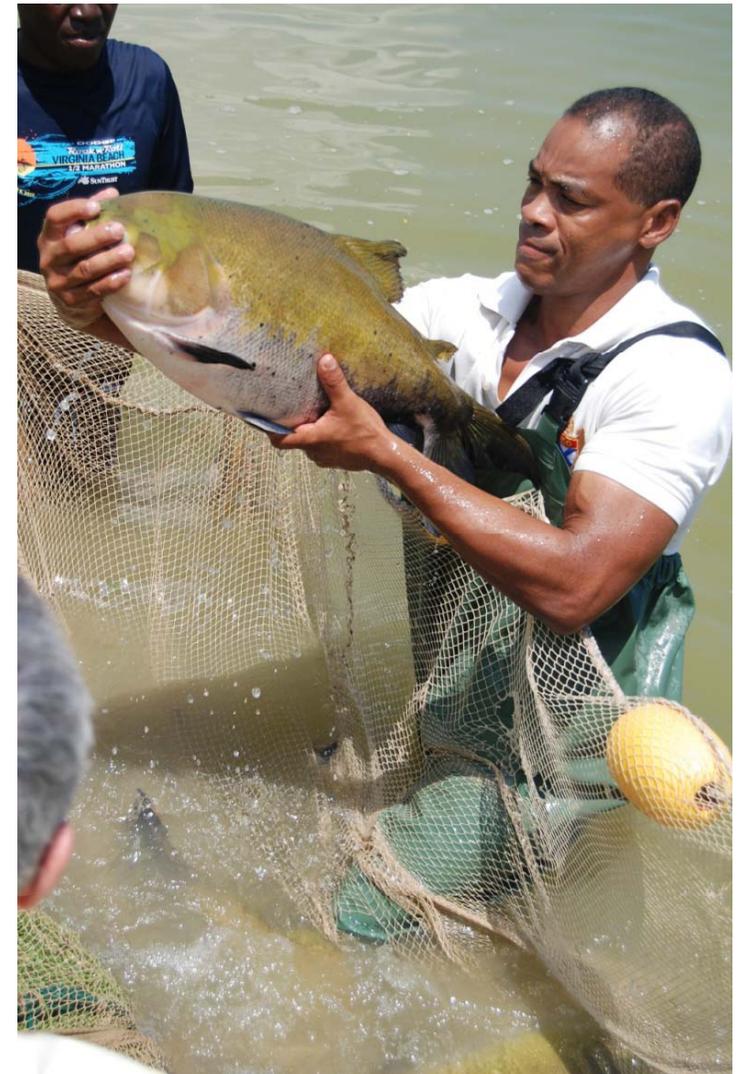
- Aquaculture and poverty: mixed picture.
 - Income, employment/livelihood (Asia).
- Pro-poor aquaculture is debatable
 - Better-off (land-owning) households who benefit the most –structural issues
 - Peri-urban fish-farmers are more likely to generate higher incomes, net returns and longer-term financial viability



Fisheries and aquaculture interaction and food security

| Quality | Size | Consistency |
|----------|-------|--------------|
| Moderate | Small | Inconsistent |

- Aquaculture as a way to fill the gap
 - Fisheries global production not expected to increase
 - Critical role of aquaculture to balance the demand/supply
 - Prices effect (pushing down the overall fish price)
- Issues / concerns
 - Fishmeal (small pelagic for carnivorous – exporting markets)
 - Competitions for resources (water, space)
 - Larger fish (not consumed whole)



Fish, food security, and the major drivers of changes

| Quality | Size | Consistency |
|---------|--------|--------------|
| Low | Medium | Inconsistent |

- Major drivers well identified
 - Demographic transition (urbanization, higher income)
 - Climate change
 - Over-exploitation and governance reform
- No clear message emerges from the literature yet
 - Recognition of the severity of the fisheries situation at the global level
 - Tools and methods to estimate impacts of global drivers on food security at local level are still missing
 - Uncertainty of climate change complicated by lack of reliable data (on small-scale fisheries)



Governance reforms in fisheries



| Quality | Size | Consistency |
|----------|--------|--------------|
| Moderate | Medium | Inconsistent |

- No one size fits all.
 - No single type of arrangements – No state / non-state actors (including the private sector)- will deliver outcomes that benefit the poor in all cases
 - Debate ‘blurred’ by a lot of advocacy pieces
- Still unclear and inconsistent signals
 - Evidence of the effectiveness of measures (decentralization/co-management) in the developing countries context remains weak
 - No tangible evidence/data to substantiate the claim that privatization of fishing rights works from a societal perspective

Gender

| Quality | Size | Consistency |
|----------|-------|-------------|
| Moderate | Large | Mixed |

- Women's roles in fisheries are not well recognised.
 - Lack of disaggregated data and relevant information
 - Tendency to confuse 'gender' with 'women'
 - Descriptive rather than analytical
 - Unrecorded and undervalued, and mainly invisible in national statistics
- Serious consequences in relation to governance

