Pangasius and Europe
the unparalleled growth of a farmed tropical whitefish in European markets

Dave Little and Francis Murray
Sustainable Aquaculture Group, Institute of Aquaculture, University of Stirling

Interested to hear your views
Text me now on 07746373382
Overview of talk

- Why pangasius? Why now?
- A brief look at how striped catfish is farmed
- Whitefish wars
- The journey to more sustainable production systems
Why pangasius? Why now?

An air-breathing fish that tolerates intensification

White fish supplies - uncertainty

European fish security - NEF report

Rapid growth of to exports to the EU reaching a plateau of around 200,000MT /year
Why pangasius? Why now?

*If tilapia is the aquatic chicken then……*

…*the striped catfish is the aquatic pig*

Omnivorous - traditional systems based on waste conversion

*From the latrine pond to consistent, quality white fish in a decade*

*Other piggy connections………*

“An ability to use starch”
Why Vietnam?

Concentrated in one small area of the Mekong Delta in one corner of Vietnam

Previous reliance on wild seed and home made feeds supporting domestic demand and limited exports

Long standing but limited exports

Transformation around 2000: widespread adoption of hatchery production

Change from cages to ponds

Large volumes of water - high rates of exchange

Farmer innovations - feeds and ponds
High density aquatic feedlots
Comparative growth: Vietnam v Bangladesh

Certifying catfish in Vietnam and Bangladesh: Who will make the grade and will it matter?
Ben Belton, Mohammad Mahfujul Haque, David C. Little, Le Xuan Sinh

Food Policy 36 (2011) 289–299
## Characteristics of catfish culture

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Vietnam</th>
<th>Bangladesh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyculture</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Market size (g)</td>
<td>1000</td>
<td>700–1000</td>
</tr>
<tr>
<td>Cropping cycle (months)</td>
<td>6</td>
<td>6–8</td>
</tr>
<tr>
<td>Cropping cycles/year</td>
<td>1–2</td>
<td>1</td>
</tr>
<tr>
<td>Yield/crop/ha (t)</td>
<td>370</td>
<td>55</td>
</tr>
<tr>
<td>Stocking density (fish/m²)</td>
<td>44</td>
<td>6</td>
</tr>
<tr>
<td>Pond depth (m)</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Standing crop/m³ (kg)</td>
<td>9.25</td>
<td>5.5</td>
</tr>
<tr>
<td>Survival (%)</td>
<td>75–80</td>
<td>90</td>
</tr>
<tr>
<td>Water exchange</td>
<td>High</td>
<td>Limited</td>
</tr>
<tr>
<td>Water use/t fish (m³)</td>
<td>3000</td>
<td>300</td>
</tr>
</tbody>
</table>

Belton et al. / Food Policy 36 (2011) 289–299
Disappearing small farms
in An Giang Province

3217 farms <500m² in 2004
-only 547 remaining in 2009

Source: DOF
Culture area not expanding

Total Area almost constant since 2007
- Farms getting bigger (& deeper)
- Vertical integration trend

Figure: Phan Thanh Lam, Source DOF/VASEP
Local value chain employment-seed

Trading and distribution of seed

PHOTO Quach Thi Thanh Binh
Local value chain employment-production

On farm employment

Contracted pond sludge removal by divers

PHOTO Quach Thi Thanh Binh
Local value chain employment-harvest

Harvest and live transportation of fish to processing plants

PHOTO Quach Thi Thanh Binh
Trimming fillets

PHOTO Jimmy Young
Changing markets
Demand
Frozen and fresh
Substitution

Price

Menu

Bush and Duijf, 2011
Whitefish wars: Pangasius, politics and consumer confusion in Europe

David C. Little a,*, Simon R. Bush b, Ben Belton c, Nguyen Thanh Phuong d, James A. Young e, Francis J. Murray a
Politicians
…and the WWF

• From dialogue to damnation

• Red-labelling linked to ‘poor governance’

• The polemic German TV programme ‘The Pangasius Lie’
Unfounded claims

• **Food safety**
  – “the water in which pangasius is being farmed is teeming with bacteria and poisoned with industrial effluents including arsenic, mercury and DDT”.

• **Environmental performance**
  – “pump thousands of tonnes of contaminants into its slow-flowing waters”

• **Social equity**
  – “slave labour … ruthlessly exploited by some major multinational companies”
The turnaround

“Far from finding a dirty, unhygienic and polluted business, Vietnamese pangasius is a new industry, meeting world-class welfare and hygiene standards and producing a quality product under first-rate conditions. It also provides secure jobs, social security benefits and pension provisions for millions of desperately poor people in the Mekong Delta”

Is it safe? RASFF alerts

Whitefish wars: Pangasius, politics and consumer confusion in Europe
Is it safe? RASFF alerts
per 1000 tonnes

Whitefish wars: Pangasius, politics and consumer confusion in Europe
Food safety impacts

• Why pangasius Rapid Alert System for Food and Feed (RASFF)
• Strong linkage with disease prevalence
  – Antibiotic residues
  – Other veterinary products
    • e.g. Malachite green, chrrystal violet, Ivermectin
• A key driver of consolidation through costs of traceability requirements
• & poor diagnostic capacity of smaller farms
Consumer confusion..a work in progress

- Mislabelling
- Glazing, polyphosphates
- Secondary processing in Europe
Understanding and improving sustainability

- Life cycle analysis
- Policy implications
- Social and economic impacts
- Public health impacts
- Contaminant modelling
- Local environment modelling
- Scoping and boundary setting
- Action research along the value chain

Ethical Aquatic Food Index
LCA pangasius

- Feed
- Boundary setting and allocation of impacts
- Encourage reuse of co-products?
- Links with pork production, energy and added value
Action research

• Information asymmetry in value chains e.g. European views on fish welfare

• Sludge reuse

• Energy and feed use
EAFL

- Certification systems - to support further development
- Whole value chain approach-LCA ++
- Holistic approach –weighting of values
- **Not** another standard but an interactive tool to support standards development and sustainable seafood sourcing
Could you use the EAFI?

• Join us at the Seafood Summit, Hong Kong and contribute to the EAFI development

• Check out progress at [www.seatglobal.eu](http://www.seatglobal.eu)

• Text (on 07746373382) or email us dcl1@stir.ac.uk, fjm3@stir.ac.uk
Questions?

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