PUTTING PRINCIPLES INTO PRACTICE

A VIETNAMESE EXPERIENCE ON BETTER MANAGEMENT PRACTICES IMPLEMENTATION

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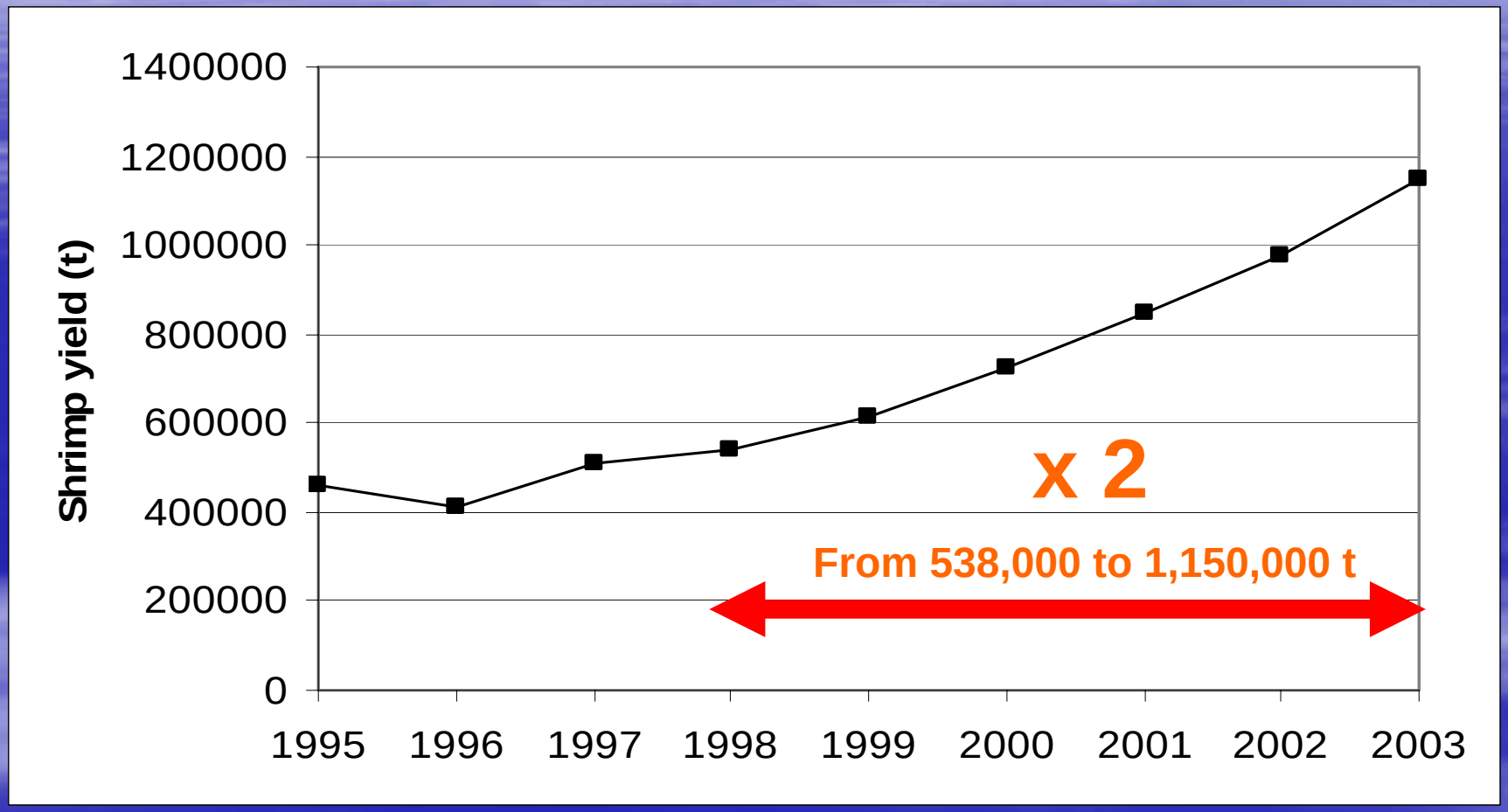
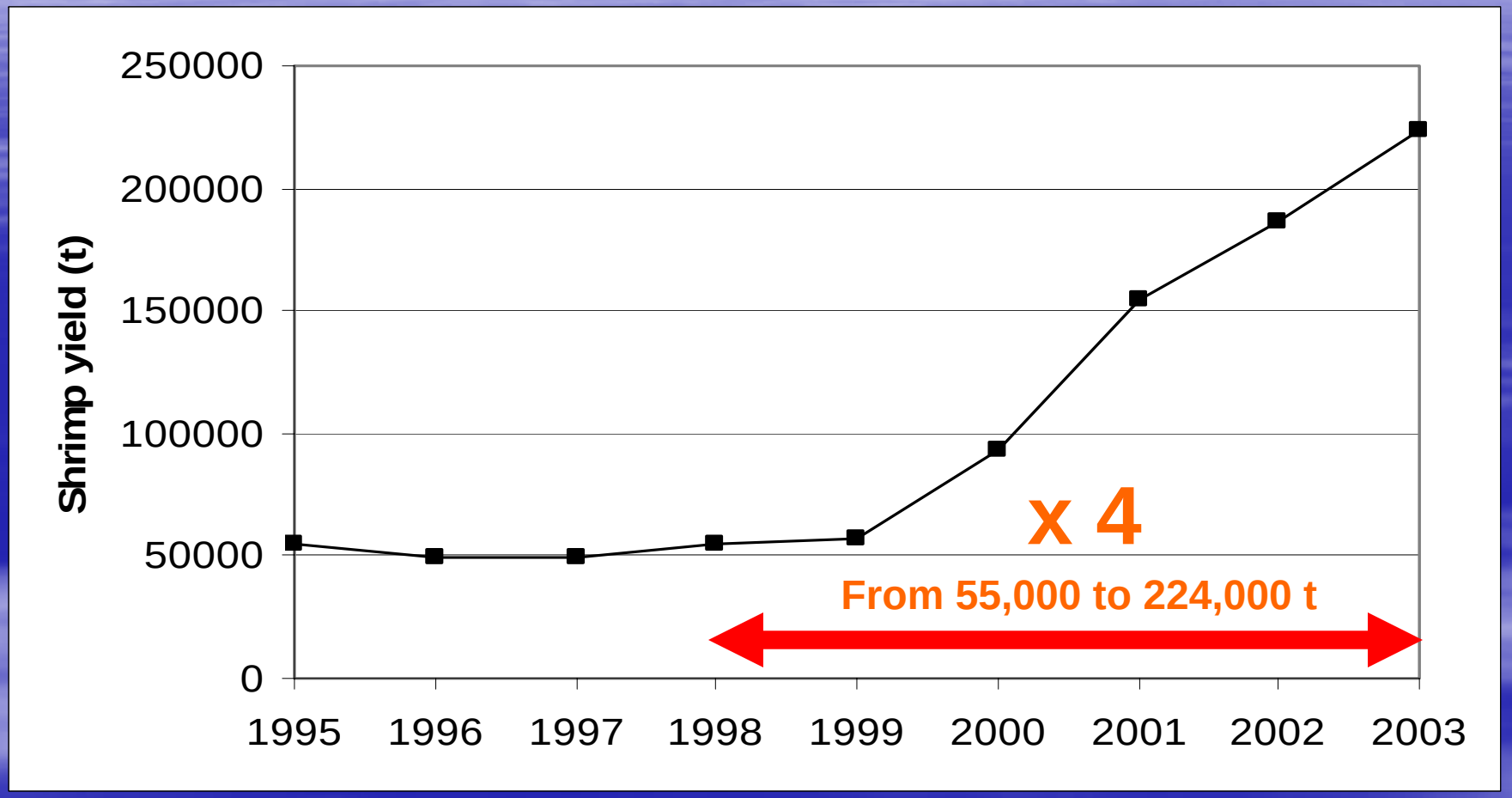
Aquaculture in Viet Nam

- Aquaculture and fisheries in 2004 produced USD 2.4 billion
- Seafood products rank 4th in foreign exchange earnings (1st in net earnings)
- Aquaculture represented 60% of value and 40% of volume from the fisheries sector
- Aquaculture production is now in excess of 1 million mt with a 17% annual growth

Aquaculture production in VN



Shrimp production in VN



Concerns for sustainability of shrimp farming sector in VN

- Environmental pollution
- Disease outbreaks
- Use of chemicals (chloramphenicol issue)
- Socio-economical sustainability of the sector

Need to look for a solution

Principles for sustainable shrimp farming

Better Management Practices
Good Aquaculture Practices

BMP/GAPs in Viet Nam

- Responsibility of NAFIQAVED (MOFI)
- Before 2003: technical guidelines given to farmers
- In 2004 start of pilots in several provinces
  - NAFIQAVED: GAP for tiger shrimp (and catfish)
  - NACA/SUMA (DANIDA): BMPs for tiger shrimp
  - Also other initiatives (not in this presentation)

GAP - NAFIQAVED

- Focused on food safety & disease control
  - NAFIQAVED: Quality Assurance & Veterinary
- Also aim at reducing environmental pollution
- 6 provinces across VN
- Mainly for intensive farms (5 prov); semi-int (1 prov)
- Regular monitoring (staff on-farm)
  - Water quality (N, P, fecal coliforms, heavy metals…)
  - Health status
  - Quality of harvested product (residues)

NAFIQAVED results

- Good quality product (within standards)
- Lower occurrence of shrimp health problems
- In GAP ponds higher yield compared with non-GAP ponds

NAFIQAVED results

Yield in GAP and Non-GAP ponds		
Province	Yield t/ha GAP ponds	Yield t/ha No-GAP ponds
Thanh Hoa – semi-int.	**0.7**	**-**
Khanh Hoa - int.	**2.2**	**-**
Bac Lieu – int.	**6.0**	**-**
Soc Trang - int.	**6.8**	**2.8**
Ben Tre - crop1 - int.	**6.6**	**5.5**
Ben Tre – crop2 - int.	**4.5**	**-**
Ca Mau - int.	**4.5**	**3.5**

BMP - NACA

- Practices were identified using experience from the region (experts, MPEDA/NACA project in India, …)
- System specific, practical & affordable by farmers

- Working with small-scale farmers (socio-economical sustainability)
- Promote disease control, food safety and reduced environmental pollution

- 2 provinces in north/central VN (now started in other 2 provinces, also in South VN)
- 6 communes (269 farmers)

BMP - NACA

- Semi-intensive farming systems
- Support farmers to:
  - Prepare the pond better
  - Check seed quality at stocking (WSSV, general health)
  - Monitor pond bottom & water quality and shrimp health
  - Improve biosecurity during production
  - Keep records
  - Better management of heath problems (reduce chemical use)

- Support implementation at every level (also hatcheries, local and national government)

BMP dissemination

- Farmers meetings
- Regular pond visits
- Extension material
- Training extension workers
- Training volunteer extension workers

Promoting farmer groups

- Collaboration
  - Improves PL quality: WSSV testing
  - Improve water management
  - Reduce disease risk
- Volunteer extension workers
  - Key to BMPs dissemination
  - Help other farmers

BMP – NACA Results

- Farmers accepted BMPs
  - willing to use them in next crop
- BMP application
  - Reduced the risk of mortality
  - Improved production
  - Improved probability of making a profit
- Indicators of BMP implementation
  - Removing soil before stocking
  - Not ploughing if acid soil
  - Testing PL for WSSV

BMP – NACA Results

Risk of experiencing mortality during production

BMP not followed	RR finding dead	p-value
Removing soil	1.36	0.001
Acid no plough	1.36	0.022
Test PL for WSSV	1.74	< 0.001

BMP – NACA Results

Yield per hectare

BMP followed	Kg/ha BMP	Kg/ha non-BMP	p-value
Removing soil	385	123	< 0.001
Acid no plough	73	42	0.023
Test PL for WSSV	452	112	< 0.001

BMP – NACA Results

Probability of making a profit

BMP followed	Loss	Even	Profit	P-value
Removing soil	45%	65%	70%	0.001
Acid no plough	16%	50%	47%	0.006
Test PL for WSSV	30%	29.4%	59%	< 0.001

Issues

- Agreed principles for responsible shrimp farming not yet finalized
  - BMP/GAP efforts not harmonized
- NAFIQAVED: government certification
  - Will importing countries trust it?
  - Need for 3rd party certification?
- In some cases implementation is expensive
  - Who will pay for it? Is it sustainable?

The Future

- **Harmonization** within VN and internationally
  - Need to establish consumers' confidence

- Establish **link to markets**
  - Better price for better product!


Thank you