

**MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT
DIRECTORATE OF FISHERIES**

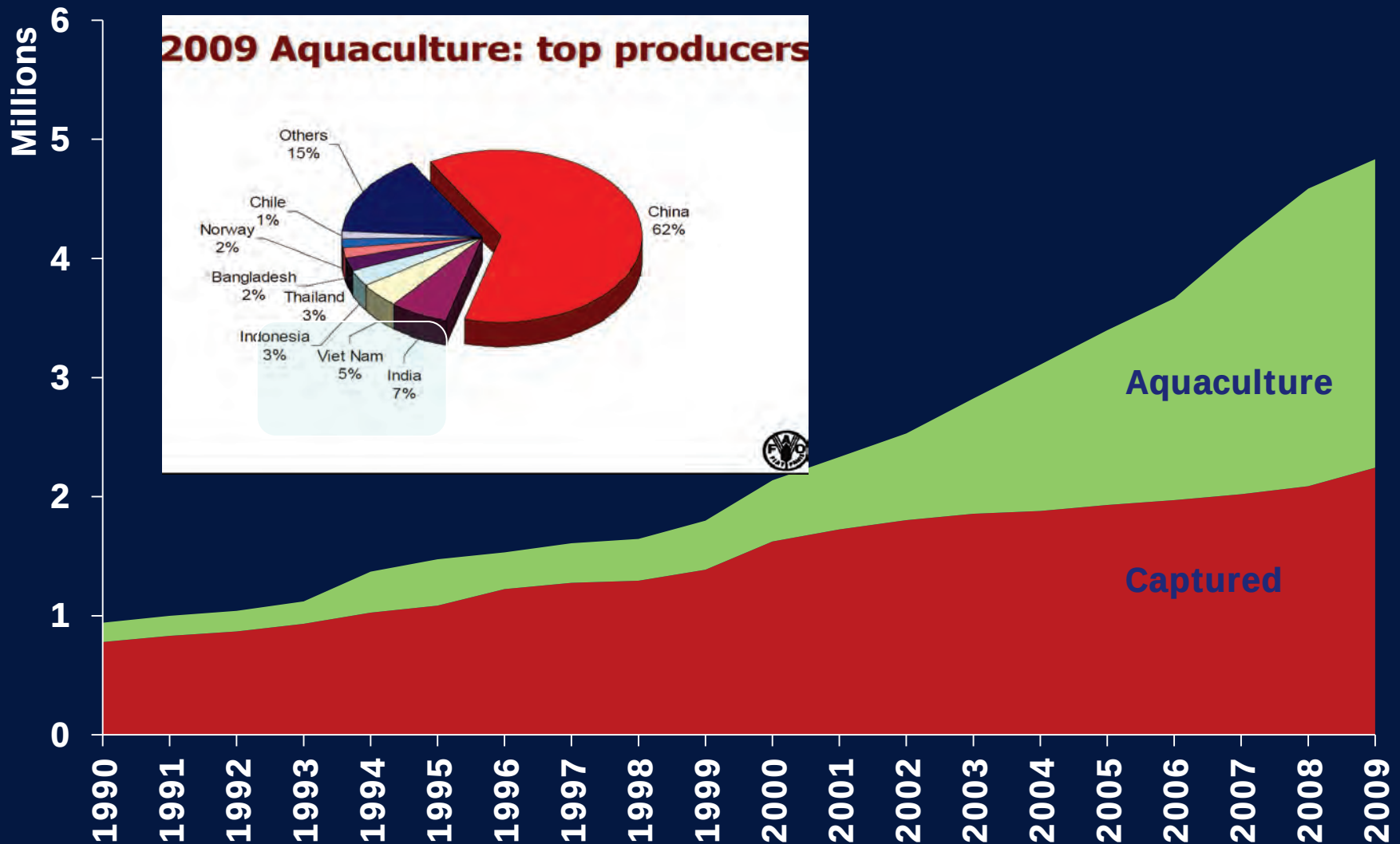
AQUACULTURE IN VIETNAM: PRESENT STATUS & STRATEGIC PLAN

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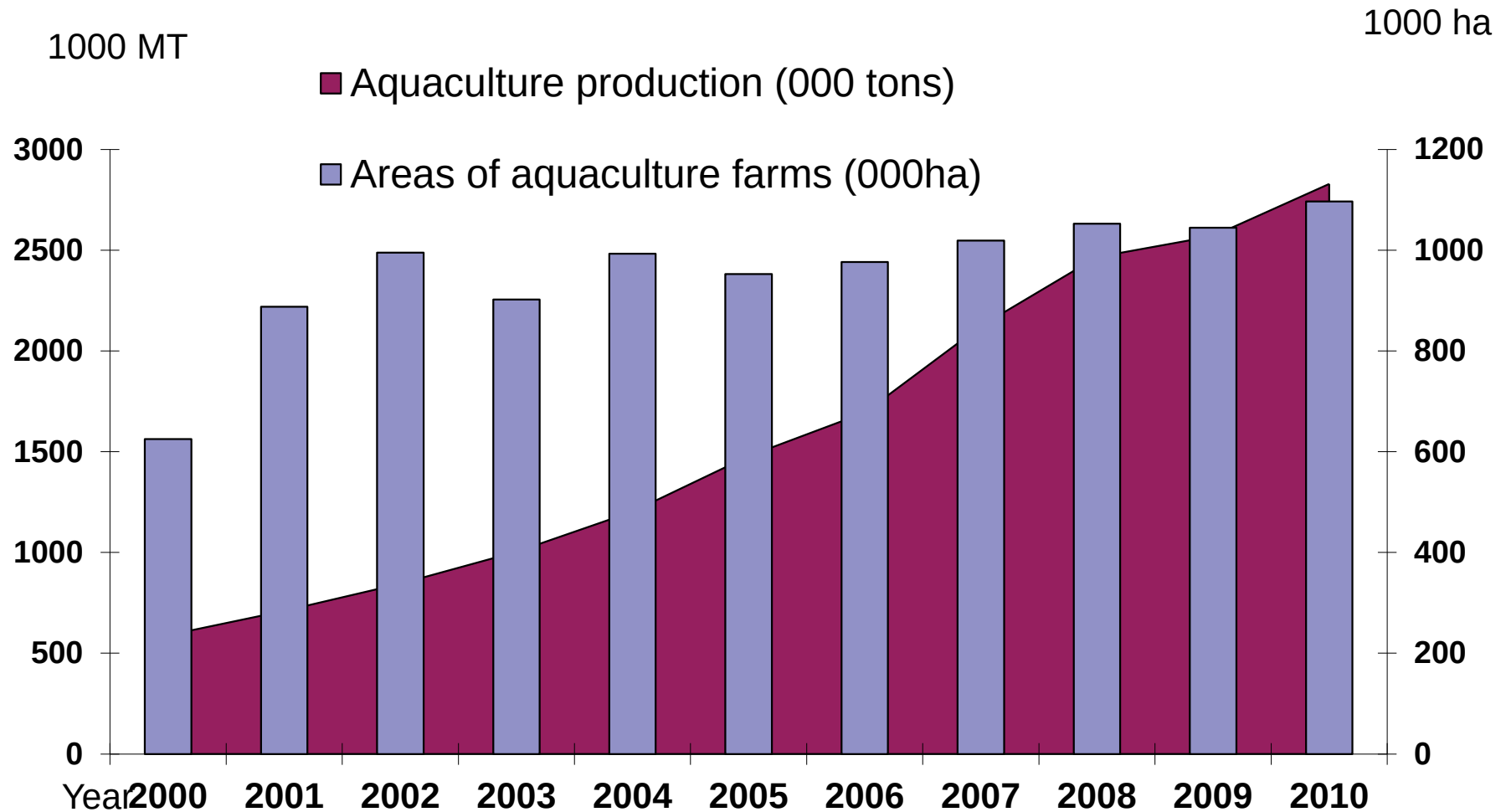
Present situation of Aquaculture in Vietnam



VN Fisheries production (FAO, 2011)

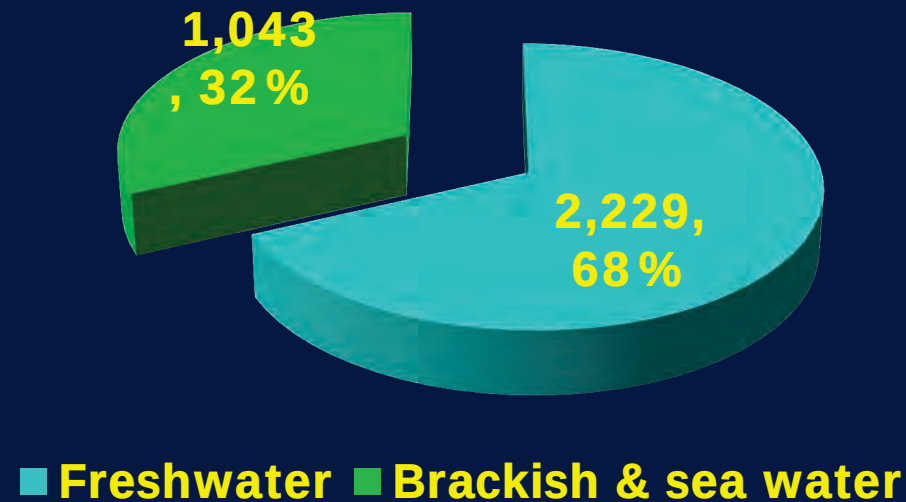


Production and farming areas



Aquaculture Structure in 2012

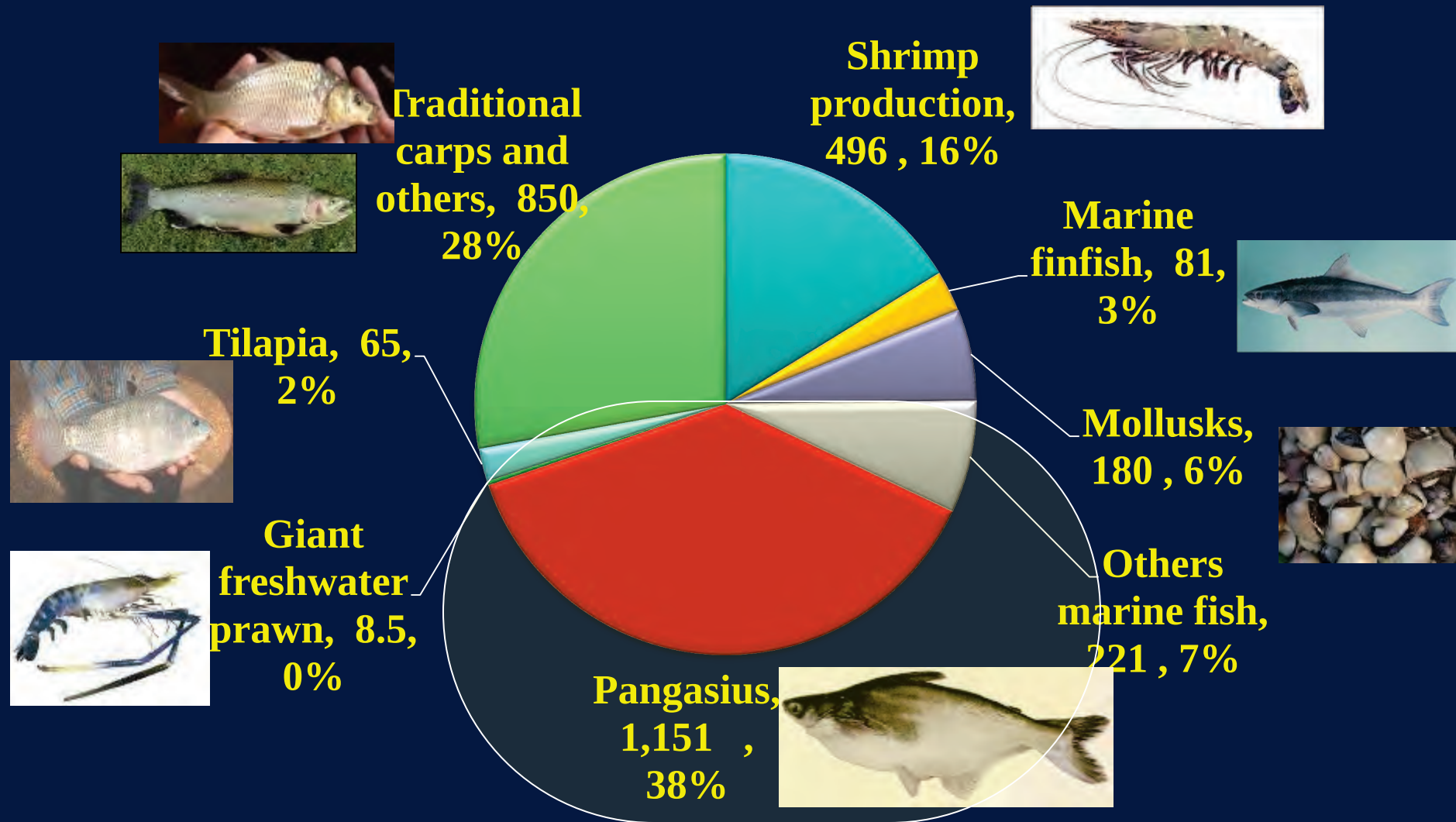
- Total Aquaculture production: 3.273.018 MT
- Brackish and Marine aquaculture (32%):
 - Farming areas: 763,708 ha
 - Production 1,043,000 MT
- Freshwater aquaculture (68%):
 - Farming areas: 431,659 ha
 - Production 2,229,000 MT



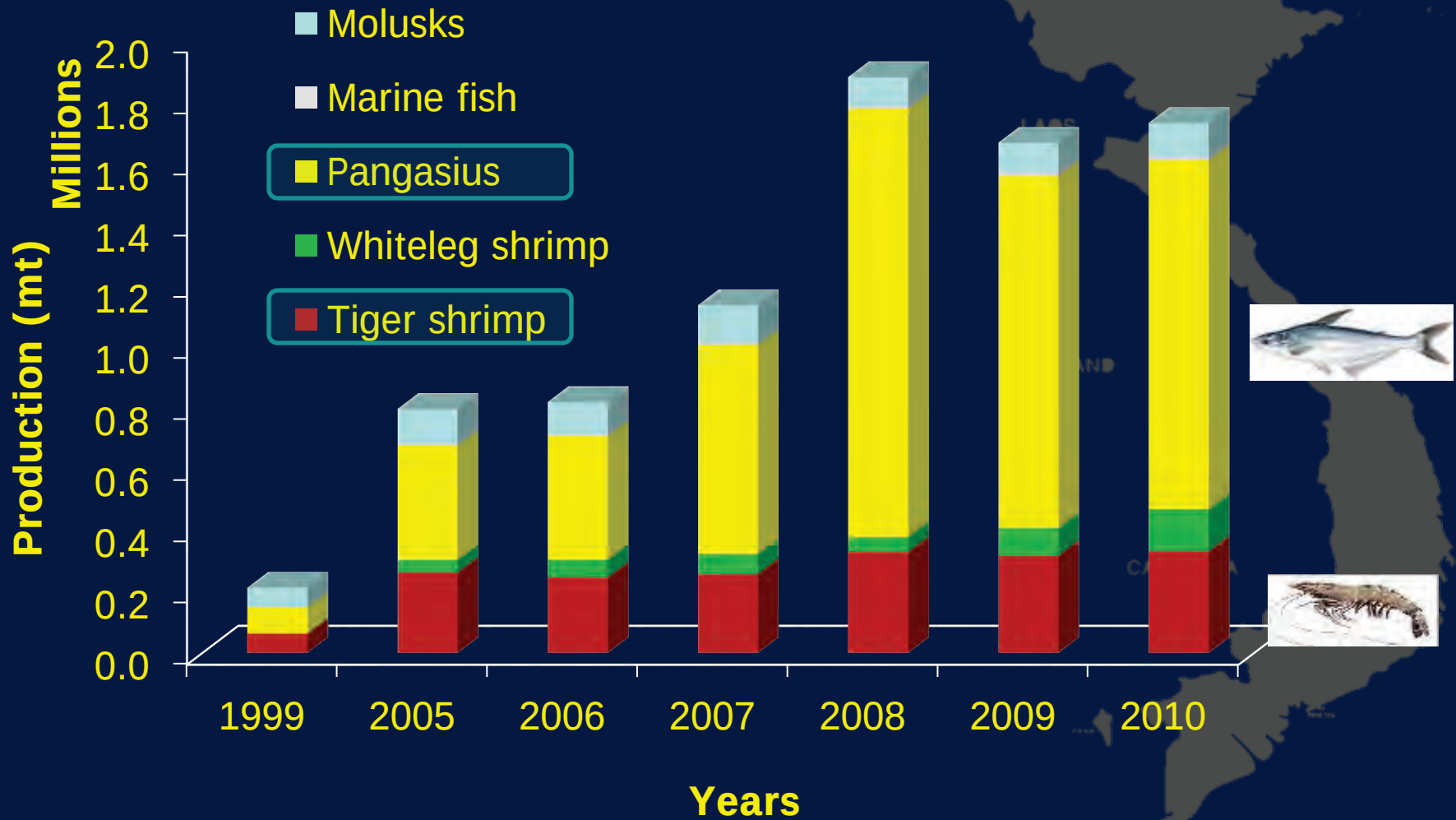
Important brackish and marine Aq. species !

	Northern Part	Central Part	Southern Part
Black tiger Shrimp (<i>Penaeus monodon</i>)	X	X	XXX
White shrimp (<i>Litopenaeus vannamei</i>)	XX	XX	X
Clam (<i>Meretrix lyrata</i> & <i>M. meretrix</i>)	X		XXX
Oyster (<i>Crassostrea</i> spp.)	X	X	X
Blood cockles (<i>Anadara granosa</i>)			X
Sea bass (<i>Lates calcarifer</i>)		X	XXX
Muddy Goby (<i>Pseudapocryptes elongatus</i>)	X		XX
Mud crab (<i>Scylla paramosaim</i>)	XX	XX	XX
Groupers (<i>Ephenelus</i> sp)	XX	XXX	X
Cobia (<i>Rachycentron canadum</i>)	XX	XX	X
Mollusk (<i>Lutraria</i> spp.),	X	X	
Pearl oyster (<i>Pieria martensii</i>)	X	X	X

Aquaculture production composition (2011)

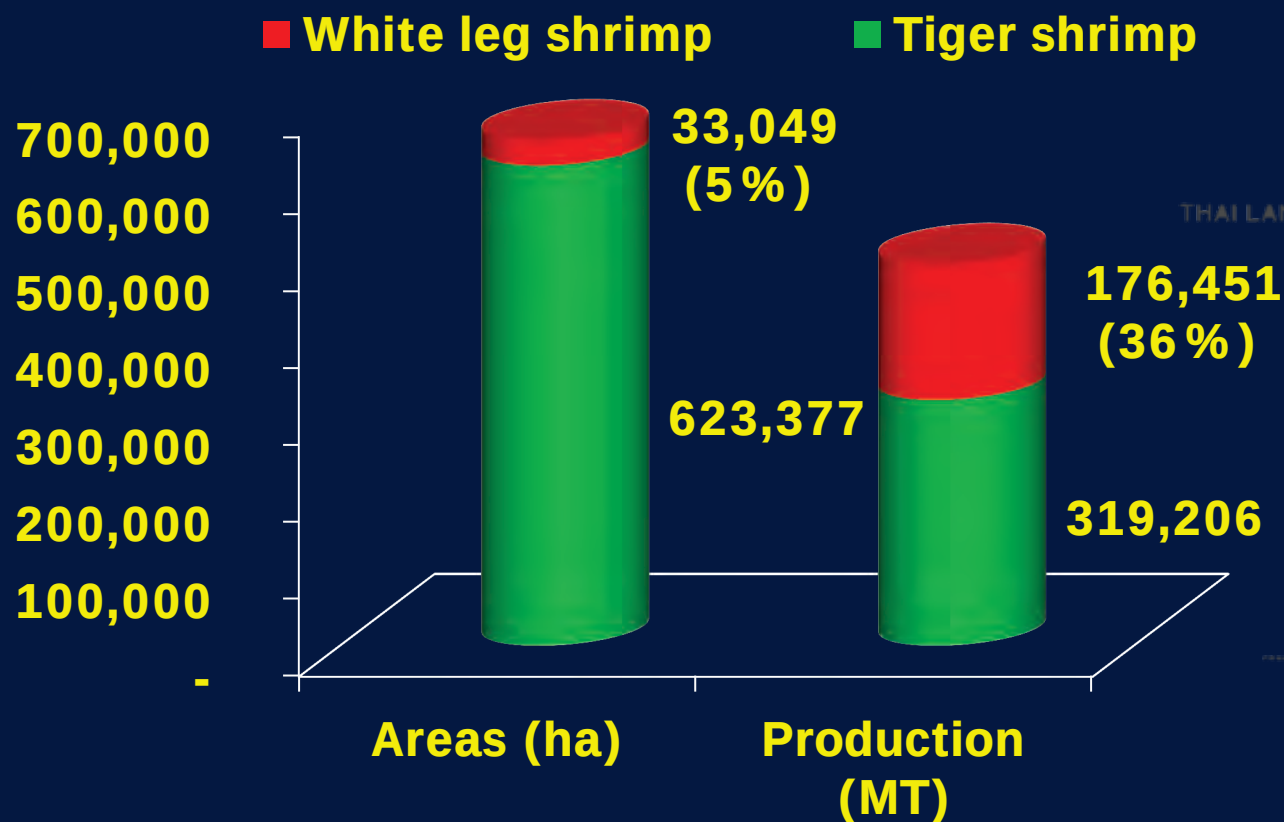


Development of the key cultured species



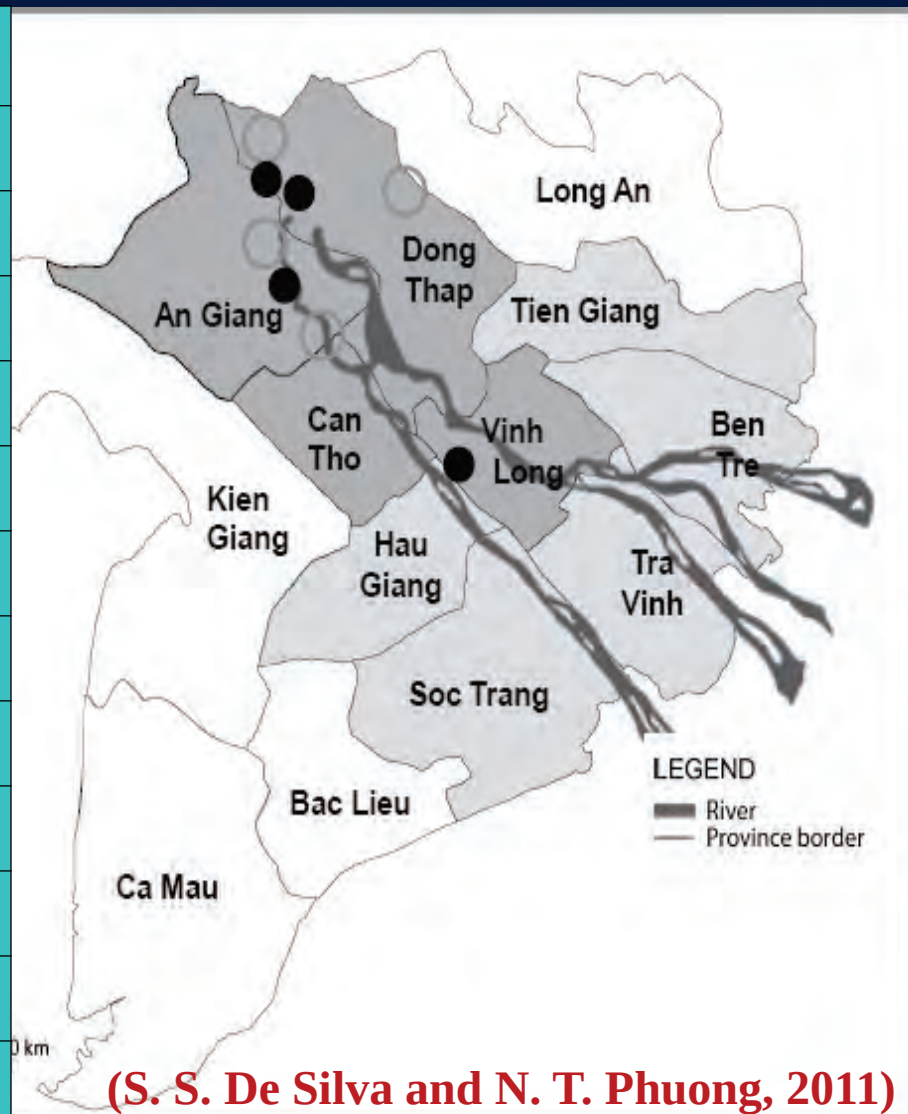
Shrimp aquaculture

- 30 Provinces
- 656,425 ha & 495,657 MT



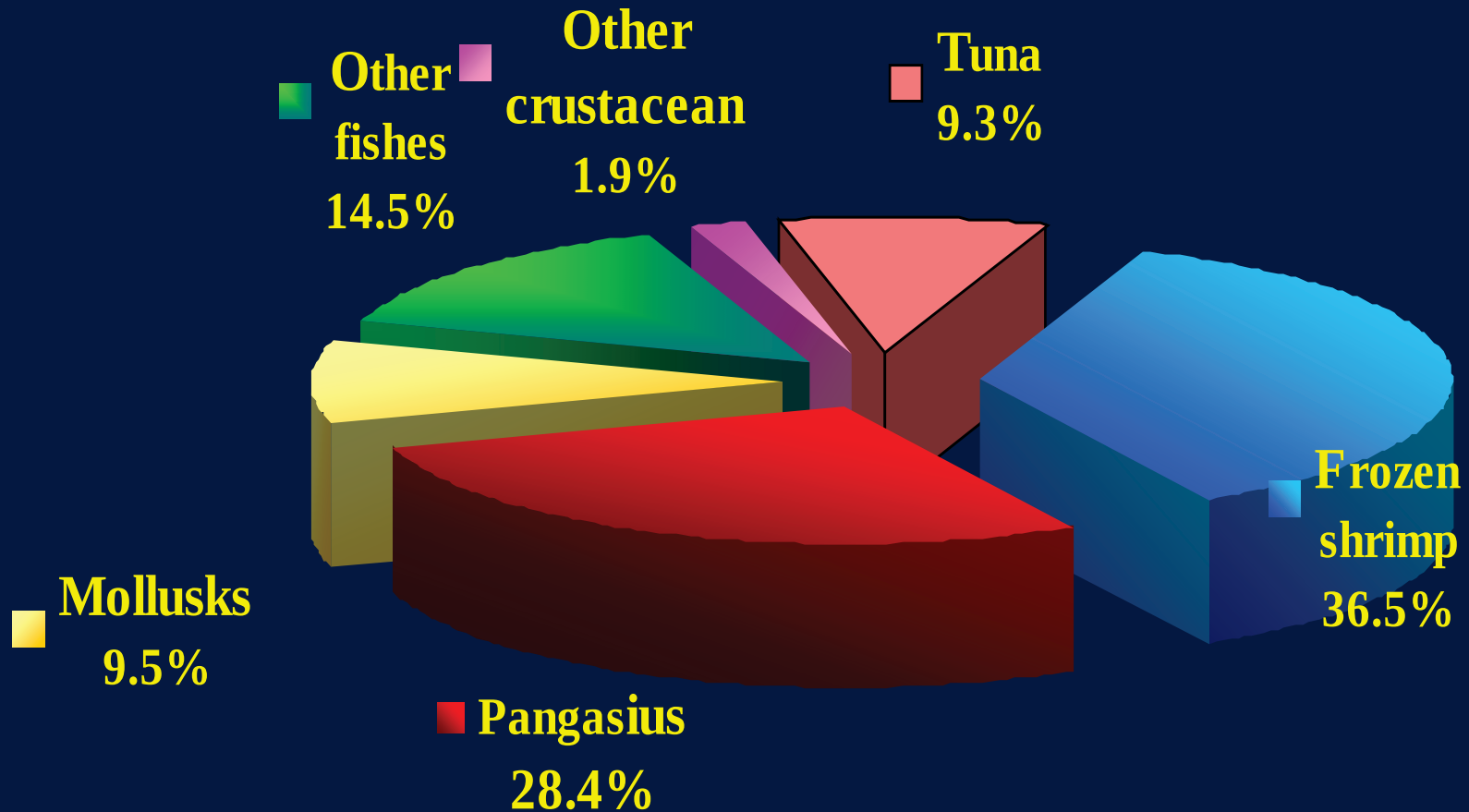
Pangasius aquaculture (11 provinces)

Provinces	Areas (ha)	Production (ton)
Đồng Tháp	1,663	333,000
An Giang	960	251,000
Cần Thơ	937	163,444
Bến Tre	650	126,750
Vĩnh Long	485	113,374
Hậu Giang	190	47,707
Tiền Giang	207	41,000
Trà Vinh	178	32,596
Sóc Trăng	167	27,400
Kiên Giang	27	6,966
Tây Ninh	25	5,500
Total	5,509	1,150,737



Export product structure (2012)

(by value)



Current aquaculture technology

- Intensive: pangasius, white leg shrimp, marine fish
- Semintensive: tiger shrimp, tilapia
- Organic/ extensive system: giant prawn
- Integrated system: VAC system, traditional fish



Aq. production relates to the common water bodies

- Mollusk culture 26.566 ha, 158.277 MT
- Cage culture: tilapia, pangasius, common caps, sturgeon, lobster ... in river, lakes, reservoir, coastal bay:

Cages (number)			Production (MT)		
Total	FW	M&B	Total	FW	M&B
107,190	21,098	86,092	154,477	138,705	15,771

Management

- Quality control of input elements: seed, feed, probiotics, chemical and drugs (Circular 26)
- Farming conditions (Circular 44, 45)
- Farms assessment and classification (Circular 14)
- Encourage/ Promotion of GAP application and certification (PM Decision 01)
- National environment monitoring program



Aquafeed production and use

- 130 aquafeed plans, appx. 4000 products
- Annual production of 2.925 mill MT of manufactured pellets (85.6% demand)
- Imported: 7.9%
- Homemade feed: 6.5%
- Feed cost: 60-85%
- FCR: increasing



Feed cost and FCR increasing ?

Feed cost (Mill VND / kg)

FCR

	2005	2010	2013		2005	2008	2012
Shrimp feed	15-16	20,5-29,2	28-37,2	Pangasius	1,4 - 1,6	1,5 – 1,8	1,6 – 2,0
Pangasius feed	5,6-6	9,8-13	11,9-17,1	Shrimp	1,0 – 1,3	1,2 – 1,35	1,3 – 1,5

Vietnam Aquaculture Towards 2020: Sustainable development and improve trading value !



- Demand: World population reach 9.2 billion by 2050: Need $>110\%$ seafood increase
- 3260 km coastal line
- More than 1 mill ha ponds for aquaculture farming

Vietnam Aquaculture Plan Toward 2020: Prime Minister Decision No. 1690/QĐ-TTg

- **Development Goal:**
 - Ensure food security
 - Increase export value

- **Targets:**
 - 7,000,000 MT of fisheries
 - 4,500,000 MT from aquaculture
 - 5,5 billion USD from exporting of aquaculture
 - 2,5 million of jobs in aquaculture

THỦ TƯỚNG CHÍNH PHỦ	CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM Độc lập - Tự do - Hạnh phúc			
Số: 1690/QĐ-TTg	Hà Nội ngày 16 tháng 9 năm 2010			
<table><tr><td>CÔNG THÔNG TIN ĐẾN TỪ CHÍNH PHỦ</td></tr><tr><td>ĐẾN Số: 7039</td></tr><tr><td>Ngày: 17/9</td></tr></table>	CÔNG THÔNG TIN ĐẾN TỪ CHÍNH PHỦ	ĐẾN Số: 7039	Ngày: 17/9	QUYẾT ĐỊNH Về việc phê duyệt Chiến lược phát triển thủy sản Việt Nam đến năm 2020
CÔNG THÔNG TIN ĐẾN TỪ CHÍNH PHỦ				
ĐẾN Số: 7039				
Ngày: 17/9				
THỦ TƯỚNG CHÍNH PHỦ				
Căn cứ Luật Tổ chức Chính phủ ngày 25 tháng 12 năm 2001;				
Căn cứ Luật Thủy sản năm 2003;				
Xét đề nghị của Bộ trưởng Bộ Nông nghiệp và Phát triển nông thôn,				
QUYẾT ĐỊNH:				
Điều 1. Phê duyệt Chiến lược phát triển thủy sản Việt Nam đến năm 2020 với các nội dung sau:				

Priority for Aquaculture:

- Planning and zoning (revising)
- Key species: Shrimp, pangasius, clam/oyster, tilapia
- Mariculture development (offshore)
- Sustain the inland Aq. areas, improve the intensive systems
- Encourage GAP practice
- Diversification in species, technology, farming system

Priority programs

- Marine aquaculture program to 2020
- Tilapia aquaculture program to 2020
- Human resource capacity building program to 2020
- Research and technology transfer program period 2010-2020
- National Aquaculture Planning & Zoning
 - Marine aquaculture planning
 - Establishment of 5 Regional fishery centers

Constrains and challenges

- Low trading value !
- Unsustainable production & imbalance in supply – demand (pangasius crisis) !
- High feed cost & high FCR – high production cost !
- Environment deterioration – outbreak of disease ?

Constrains and challenges

- Outbreak of shrimp diseases:
EMS/ white spot/ yellow head ...
 - 2011: 97.000 ha
 - 2012: 94.000 ha
 - 2013 (end of May) 23.838 ha
- Mass mortality of clam:
 - High density ?
 - Environment/ CC ?



How to sustain production and Environment integrity ?

- For closed systems (ponds, RAS, tanks...): better control of sewage/ effluents discharged from ponds ?
- For aquaculture systems in natural water bodies: cage/pen culture in reservoir, river, coastal bays: how to avoid/ mitigate pollution ?
- ...

What we are expecting ?

- Modeling ACC for better Aquaculture Planning & Zoning/ appropriate policy for sustainable development ?
 - Simple demonstration
 - Resources



Thank you !