

James Anderson



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Dr. James Anderson leads the World Bank's Global Program on Fisheries and Aquaculture. He previously chaired the Department of Environmental & Natural Resource Economics at the University of Rhode Island.

Anderson was also the editor of *Marine Resource Economics* from 1999 through 2011.

Anderson's recent work has focused on the role of seafood in food security, constraints to aquaculture development and seafood market analysis.



Shrimp Production Review

James L. Anderson

The World Bank, Washington, DC, USA

Diego Valderrama

Food and Resource Economics Department, University of Florida, USA

GOAL 2013

Shrimp Production Survey

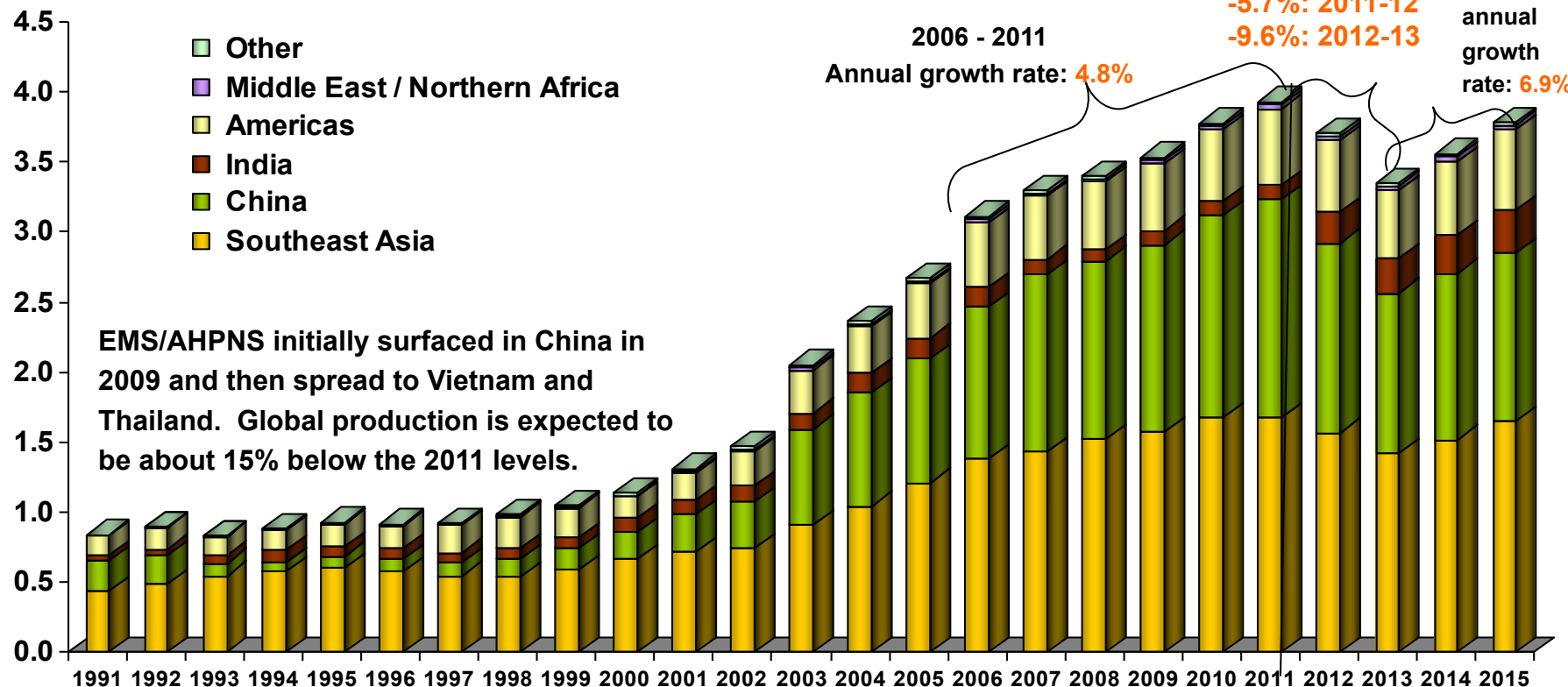
Issues & Challenges

GOAL 2013 Survey

Shrimp Aquaculture Production by World Region:

1991 - 2015

Million MT



Sources: FAO (2013) for 1991-2011; GOAL (2013) for 2012-2015.

Southeast Asia includes Thailand, Vietnam, Indonesia, Bangladesh, Malaysia, Philippines, Myanmar and Taiwan.

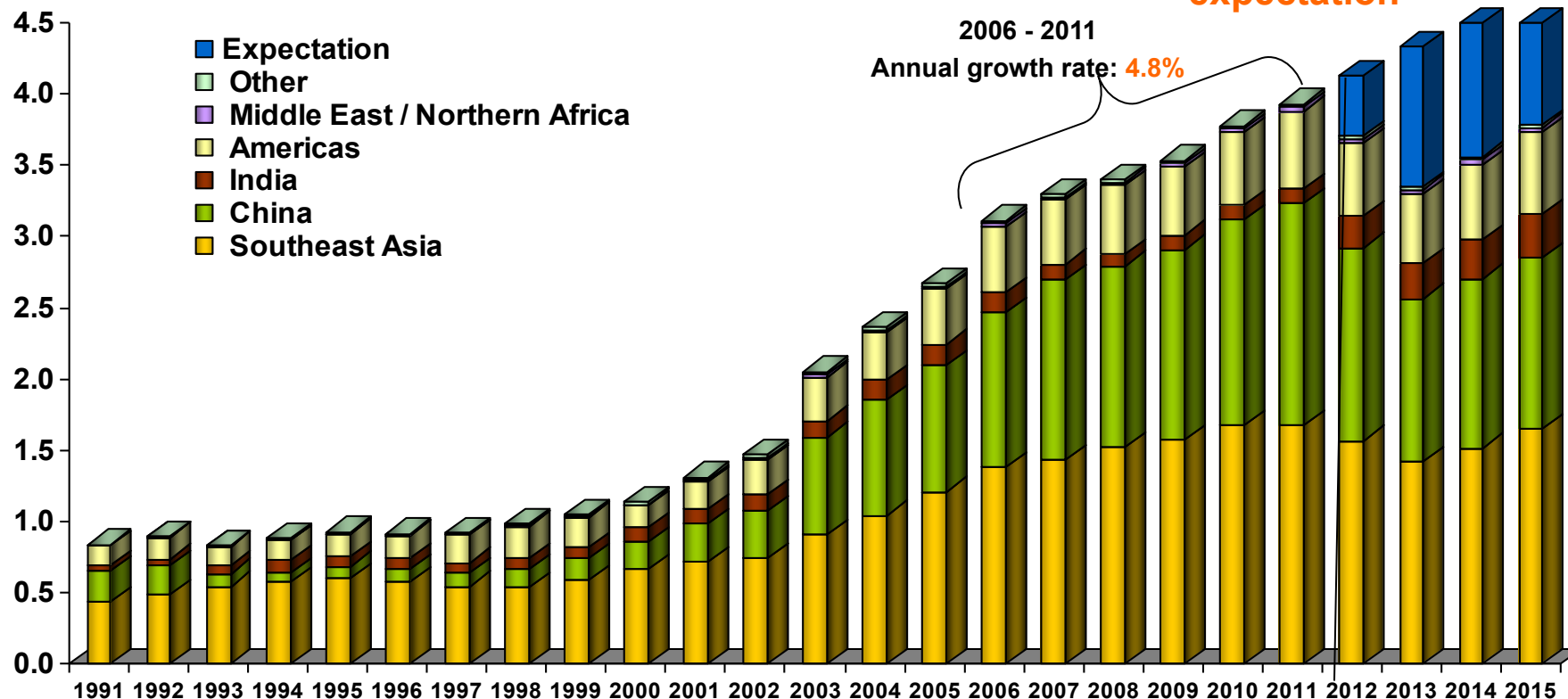
M. rosenbergii is not included.

GOAL 2013 Survey

Shrimp Aquaculture Production by World Region:

1991 - 2015

Million MT



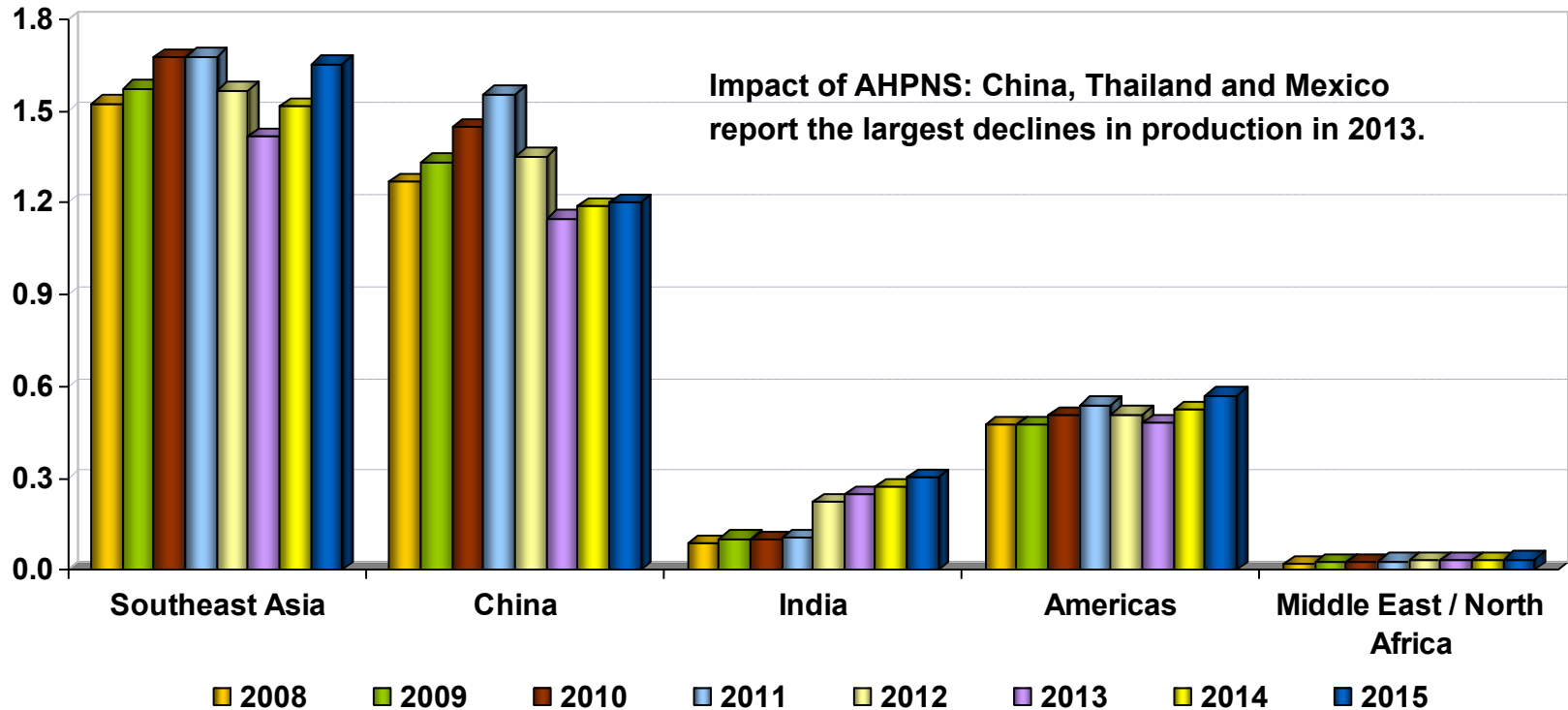
Sources: FAO (2013) for 1991-2011; GOAL (2013) for 2012-2015.

Southeast Asia includes Thailand, Vietnam, Indonesia, Bangladesh, Malaysia, Philippines, Myanmar and Taiwan.

M. rosenbergii is not included.

Shrimp Aquaculture by Major Producing Regions: 2008 – 2015

Million MT



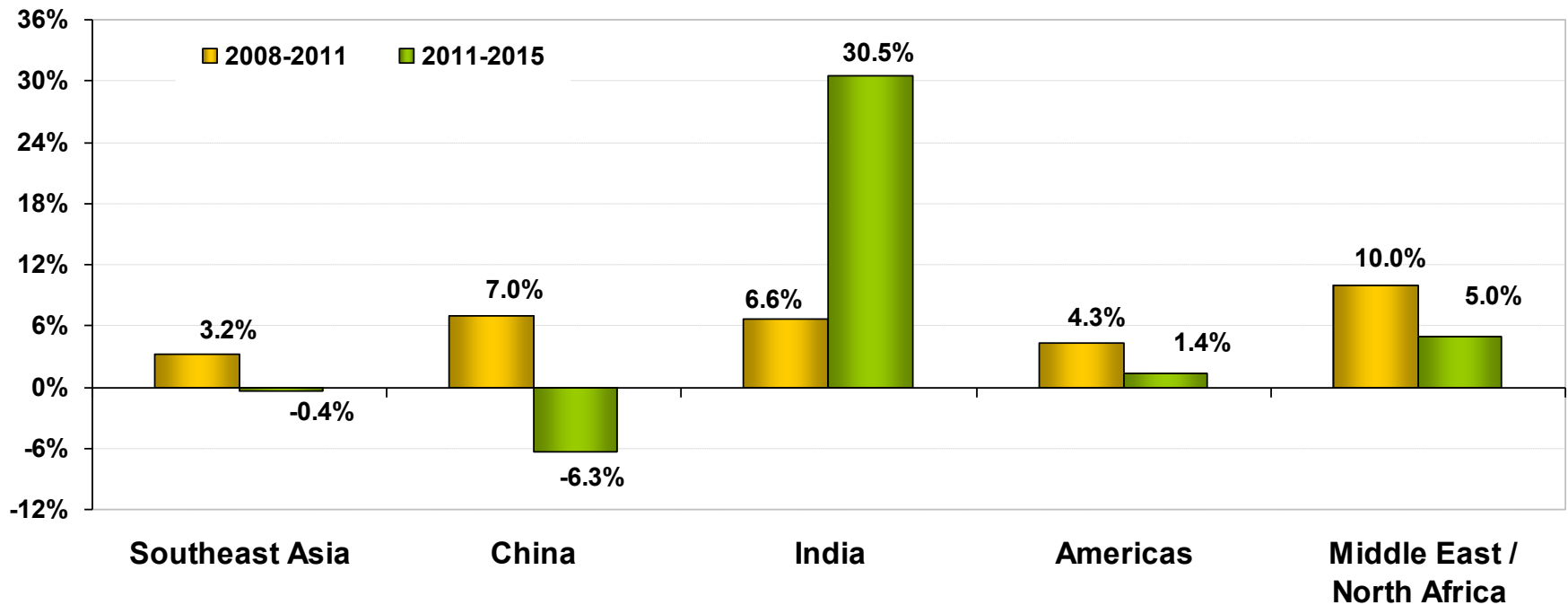
Sources: FAO (2013) for 2008-2011; GOAL (2013) for 2012-2015.

Southeast Asia includes Thailand, Vietnam, Indonesia, Bangladesh, Malaysia, Philippines, Myanmar and Taiwan.

M. rosenbergii is not included.

Shrimp Aquaculture by Major Producing Regions: 2008-2011 vs. 2011-2015

Average Annual Growth
Rate



Sources: FAO (2013) for 2008-2011; GOAL (2013) for 2012-2015.

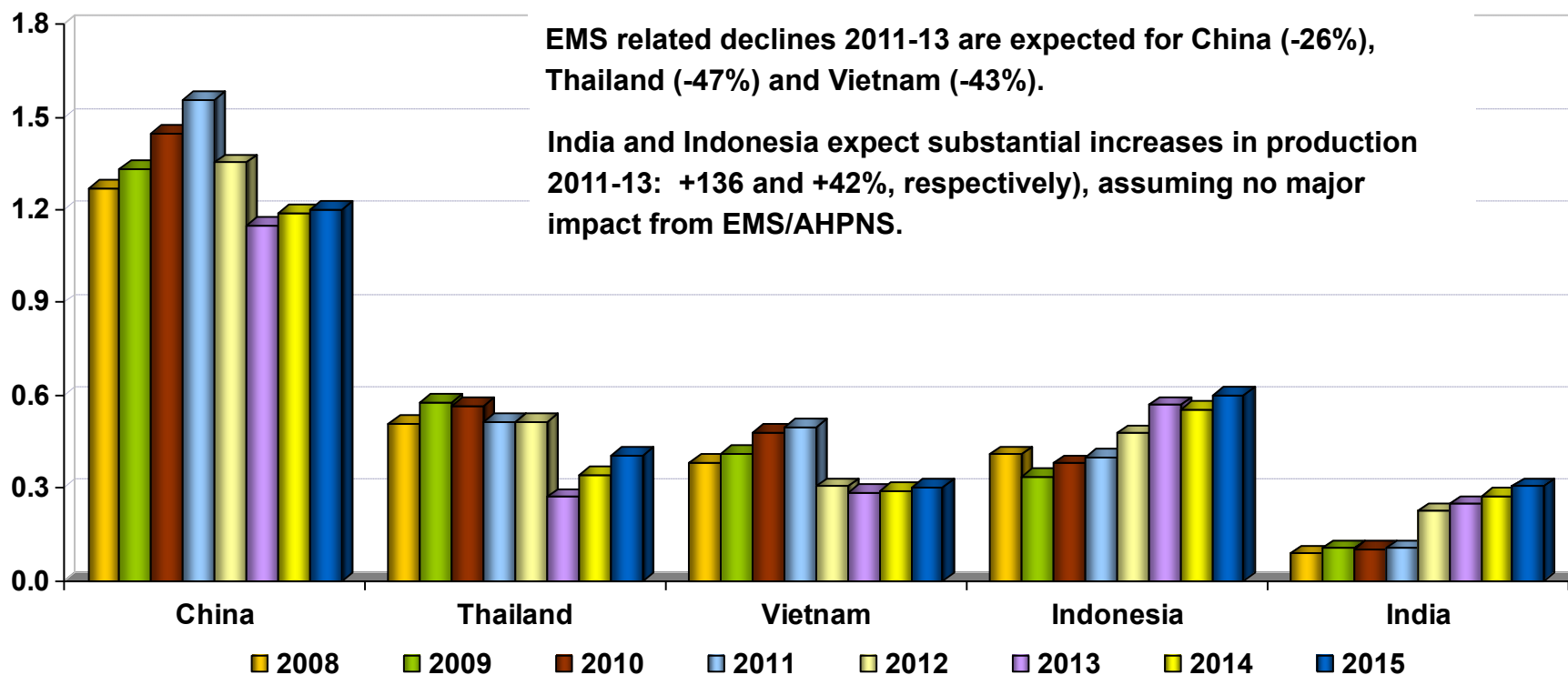
Southeast Asia includes Thailand, Vietnam, Indonesia, Bangladesh, Malaysia, Philippines, Myanmar and Taiwan.

M. rosenbergii is not included.

Shrimp Aquaculture in Asia: 2008 – 2015

Major Producers

Million MT

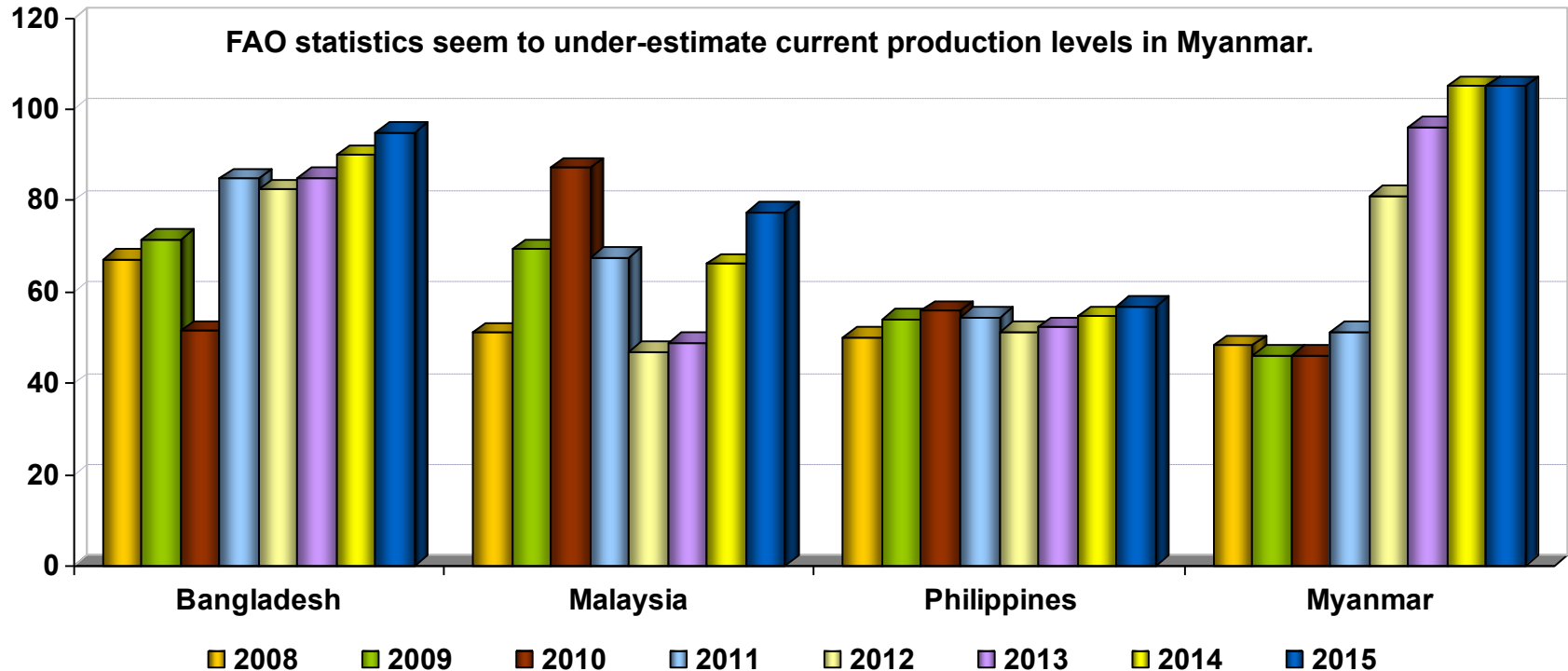


Sources: FAO (2013) for 2008-2011; GOAL (2013) for 2012-2015.

M. rosenbergii is not included.

Shrimp Aquaculture in Asia: 2008 – 2015

Thousand MT

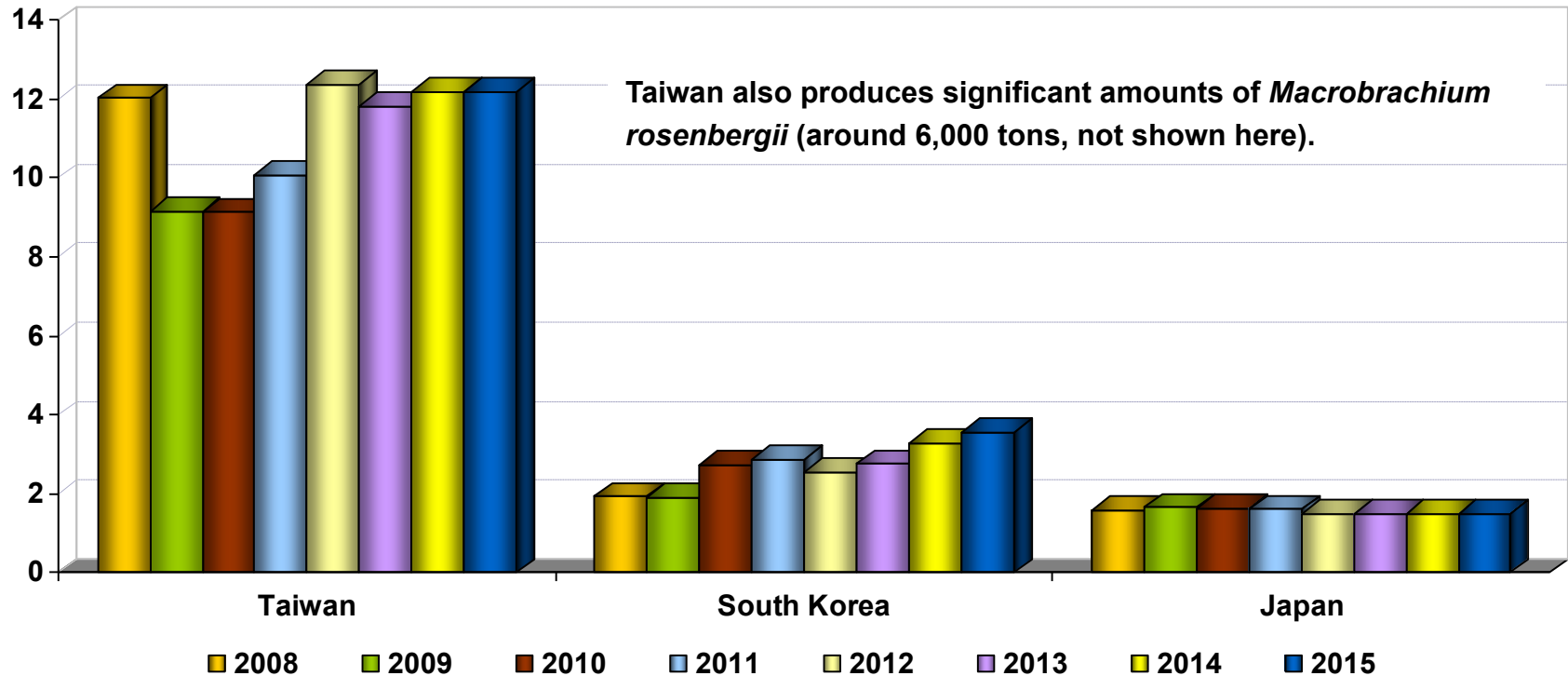


Sources: FAO (2013) for 2008-2011; GOAL (2013) for 2012-2015.

M. rosenbergii is not included.

Shrimp Aquaculture in Asia: 2008 – 2015

Thousand MT

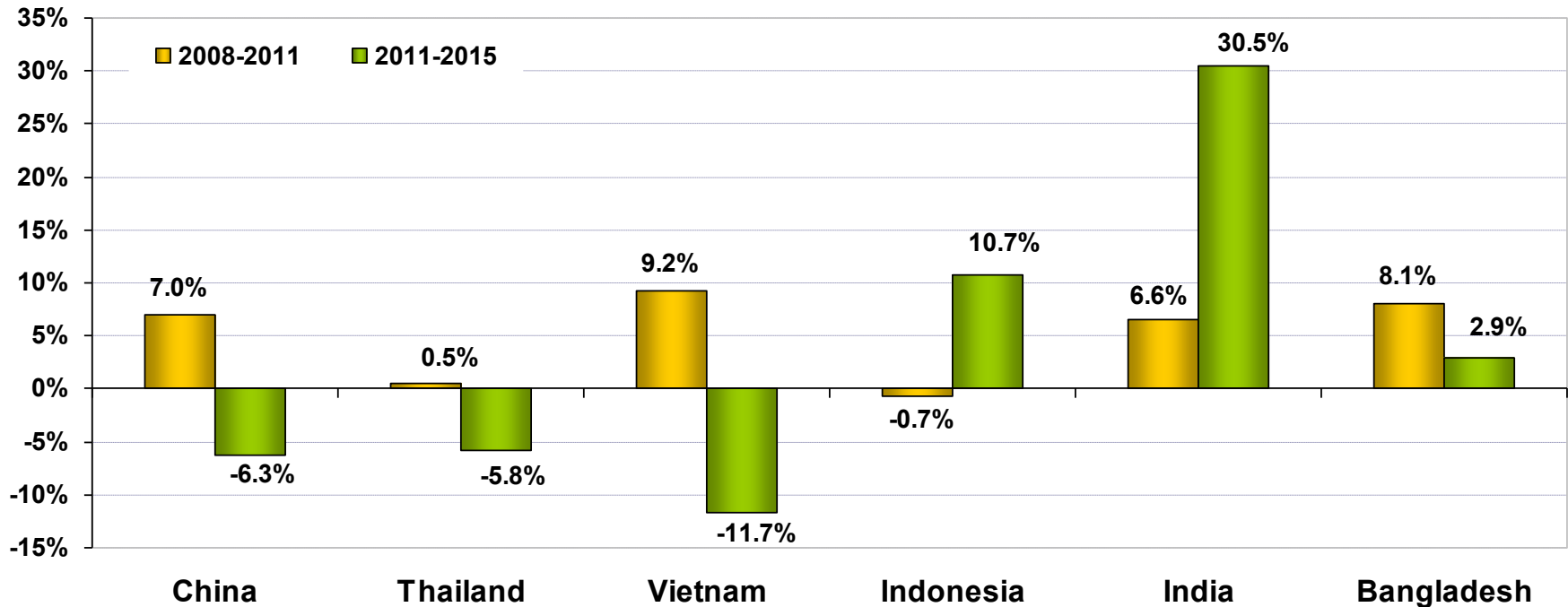


Sources: FAO (2013) for 2008-2011; GOAL (2013) for 2012-2015.

M. rosenbergii is not included.

Shrimp Aquaculture in Asia: 2008-2011 vs. 2011-2015

Average Annual Growth
Rate

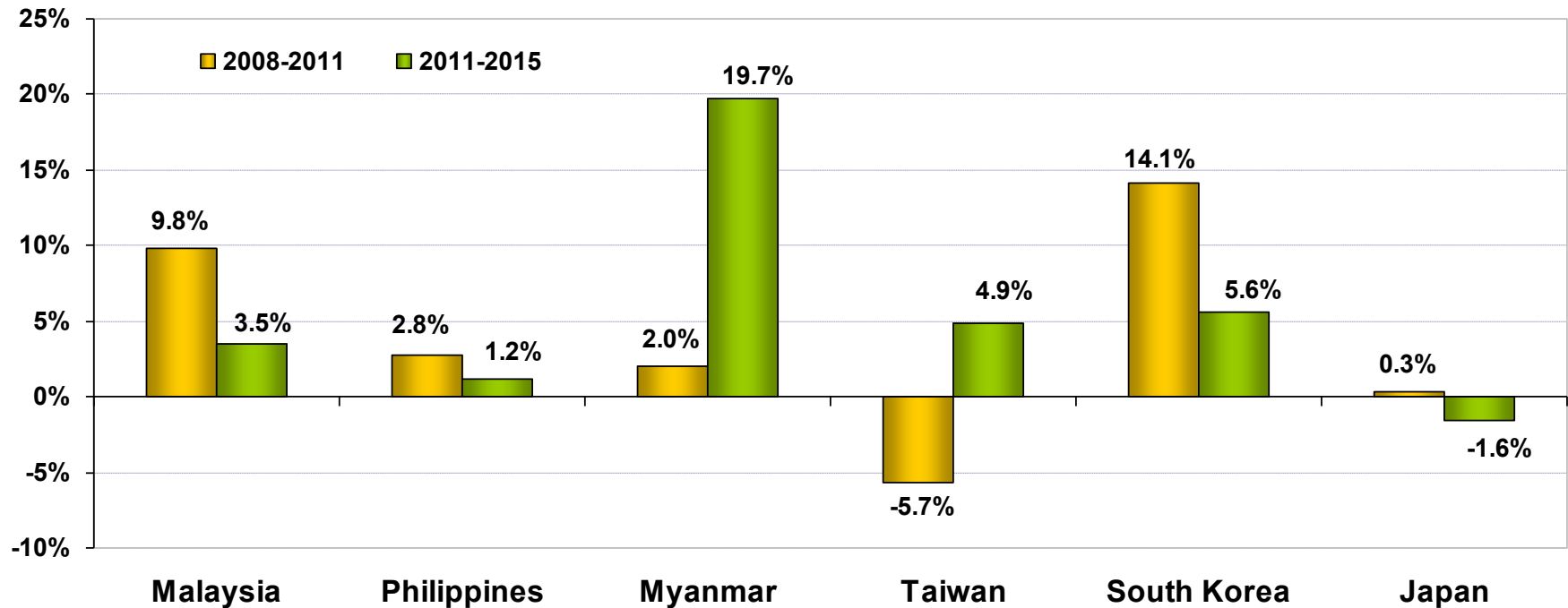


Sources: FAO (2013) for 2008-2011; GOAL (2013) for 2012-2015.

M. rosenbergii is not included.

Shrimp Aquaculture in Asia: 2008-2011 vs. 2011-2015

Average Annual Growth
Rate



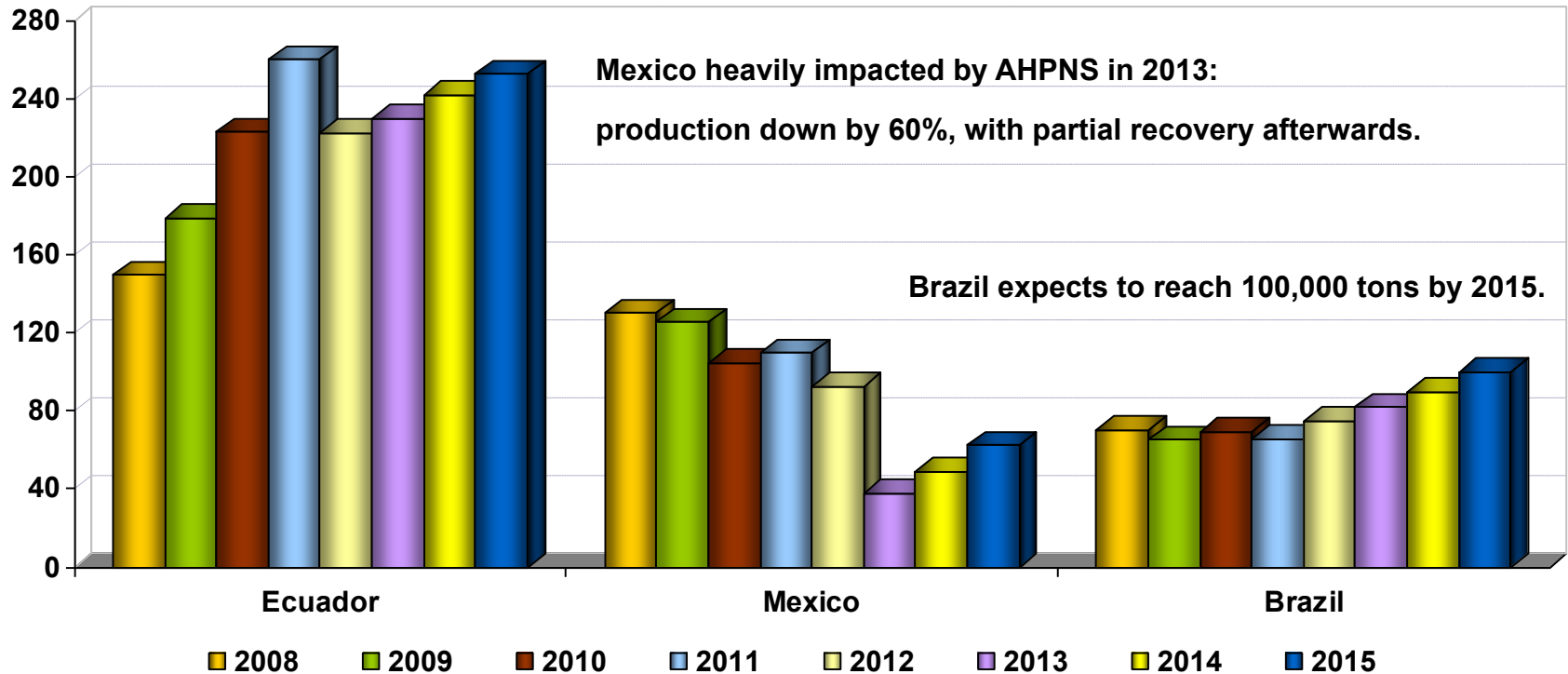
Sources: FAO (2013) for 2008-2011; GOAL (2013) for 2012-2015.

M. rosenbergii is not included.

Shrimp Aquaculture in Latin America: 2008 – 2015

Major Producers

Thousand MT

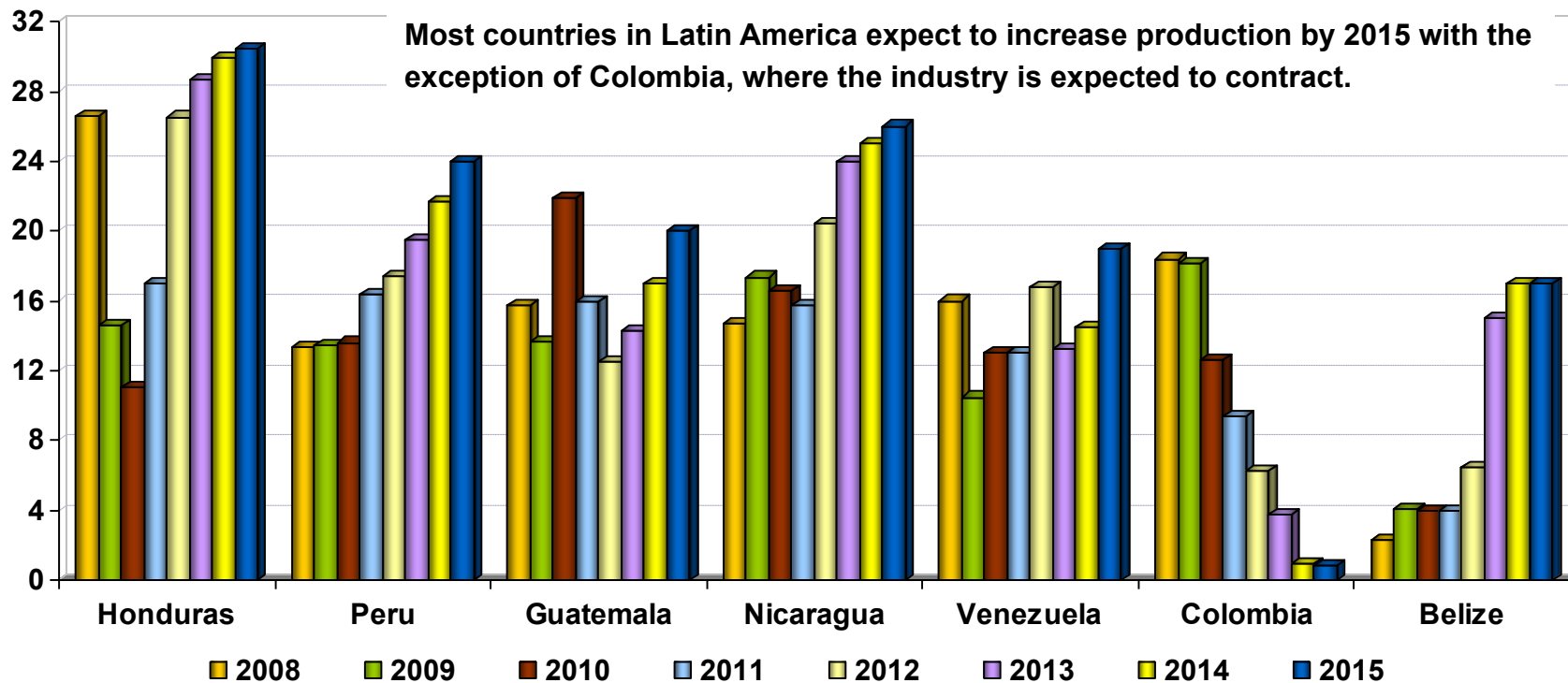


Sources: FAO (2013) for 2008-2011; GOAL (2013) for 2012-2015.

M. rosenbergii is not included.

Shrimp Aquaculture in Latin America: 2008 – 2015

Thousand MT

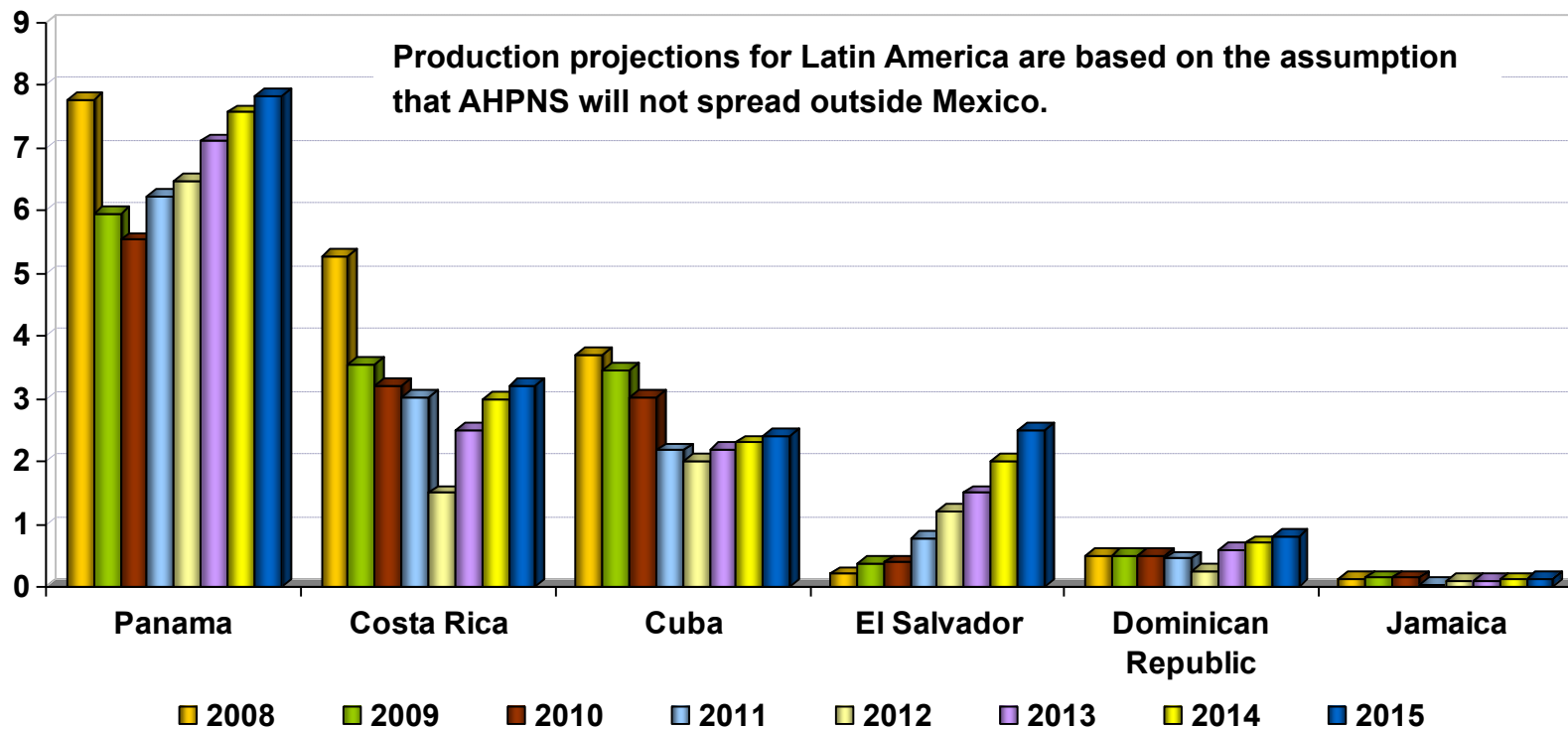


Sources: FAO (2013) for 2008-2011; GOAL (2013) for 2012-2015.

M. rosenbergii is not included.

Shrimp Aquaculture in Latin America: 2008 – 2015

Thousand MT

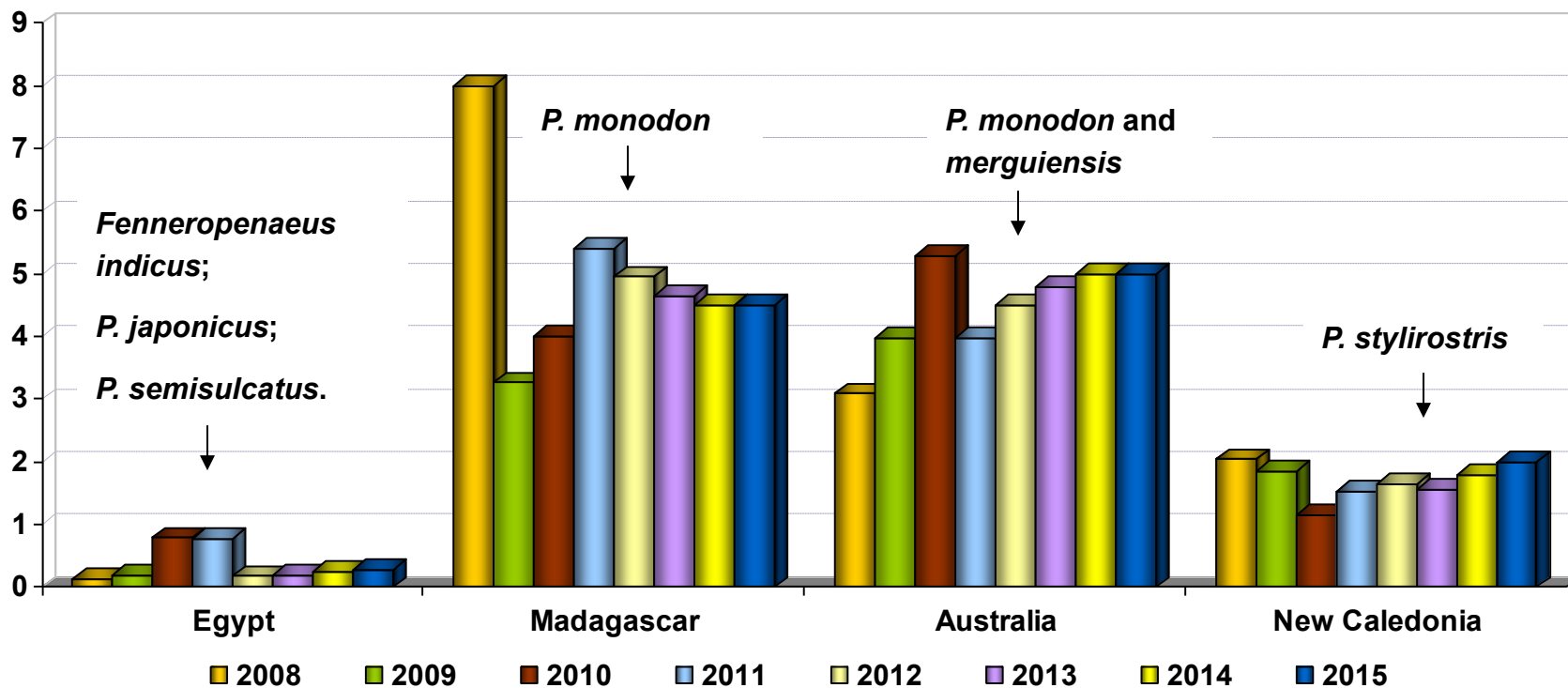


Sources: FAO (2013) for 2008-2011; GOAL (2013) for 2012-2015.

M. rosenbergii is not included.

Shrimp Aquaculture in Other Reporting Countries: 2008 – 2015

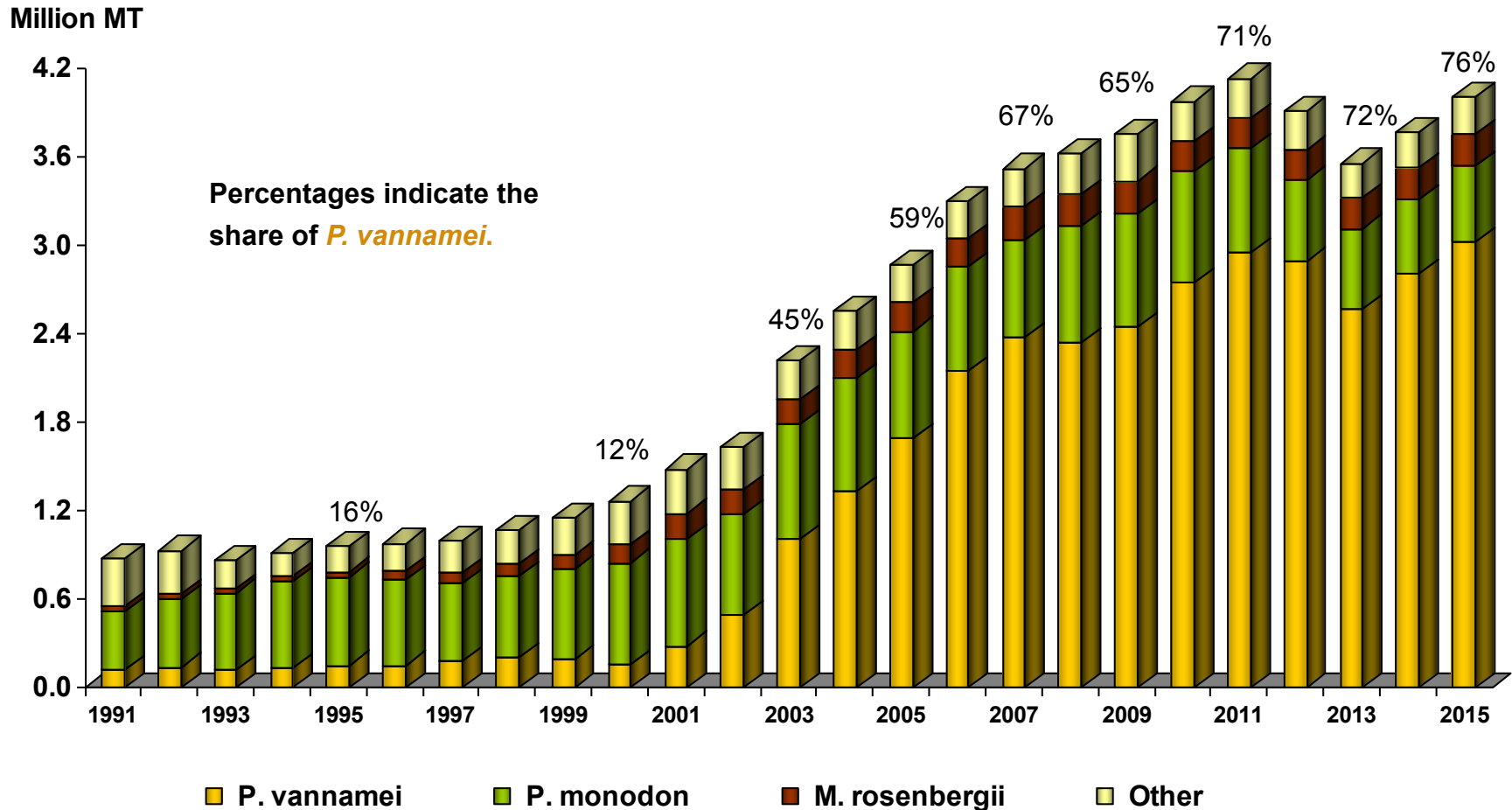
Thousand MT



Sources: FAO (2013) for 2008-2011; GOAL (2013) for 2012-2015.

M. rosenbergii is not included.

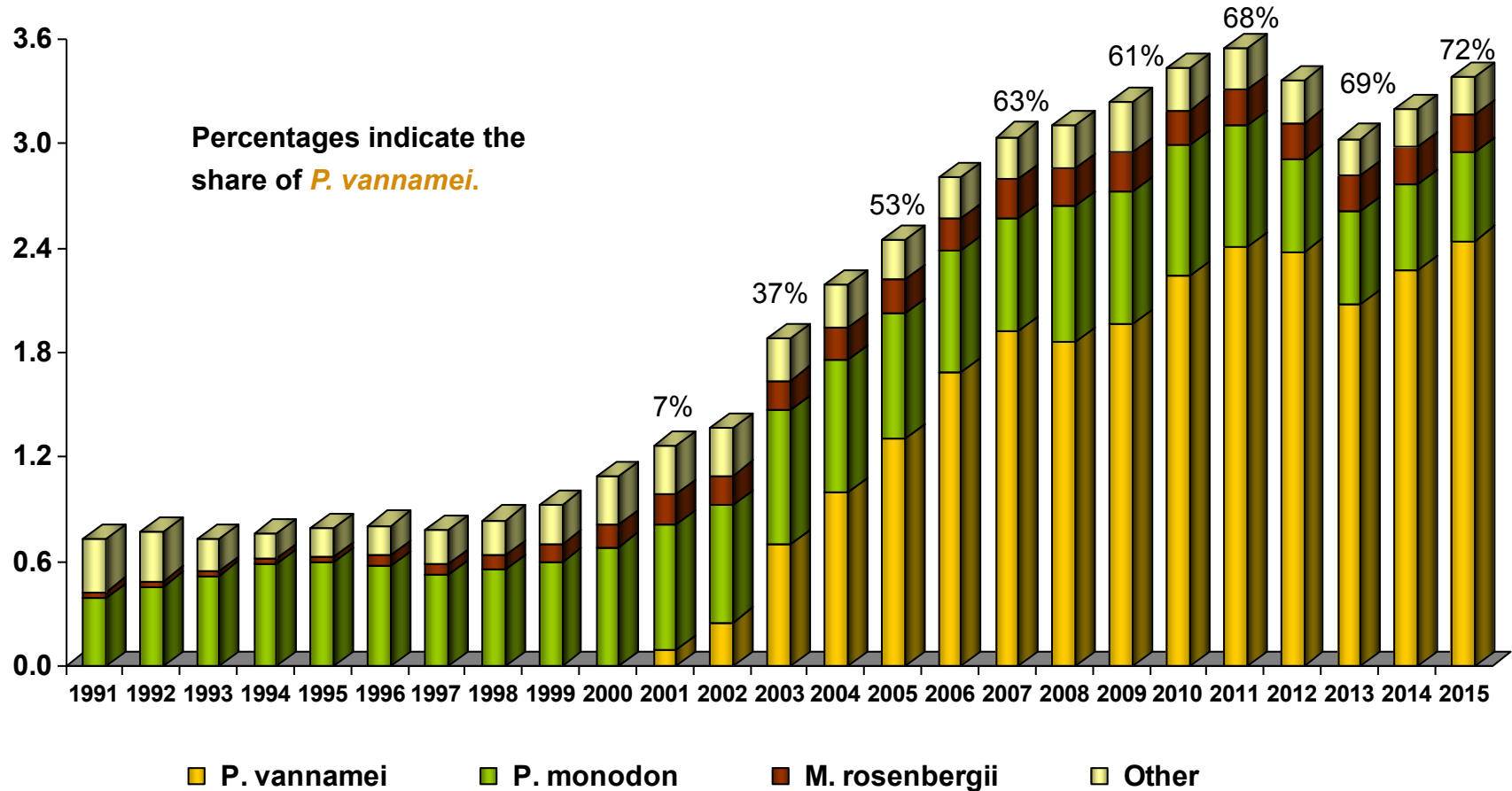
World Shrimp Aquaculture (including *M. rosenbergii*) by Species: 1991 - 2015



Sources: FAO (2013) for 1991-2011; GOAL (2013) for 2012-2015.

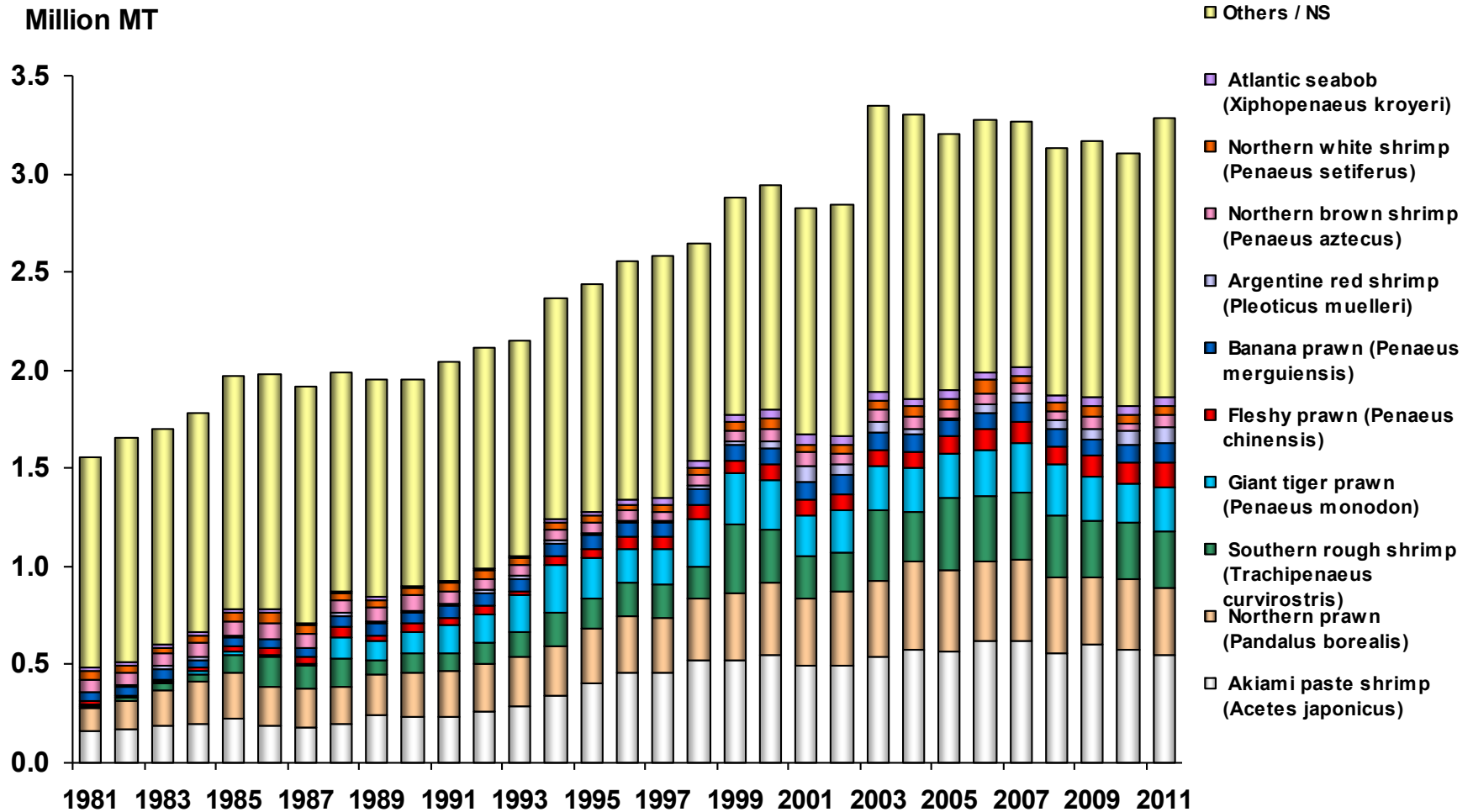
Shrimp Aquaculture (including *M. rosenbergii*) in Asia by Species: 1991 - 2015

Million MT



Sources: FAO (2013) for 1991-2011; GOAL (2013) for 2012-2015.

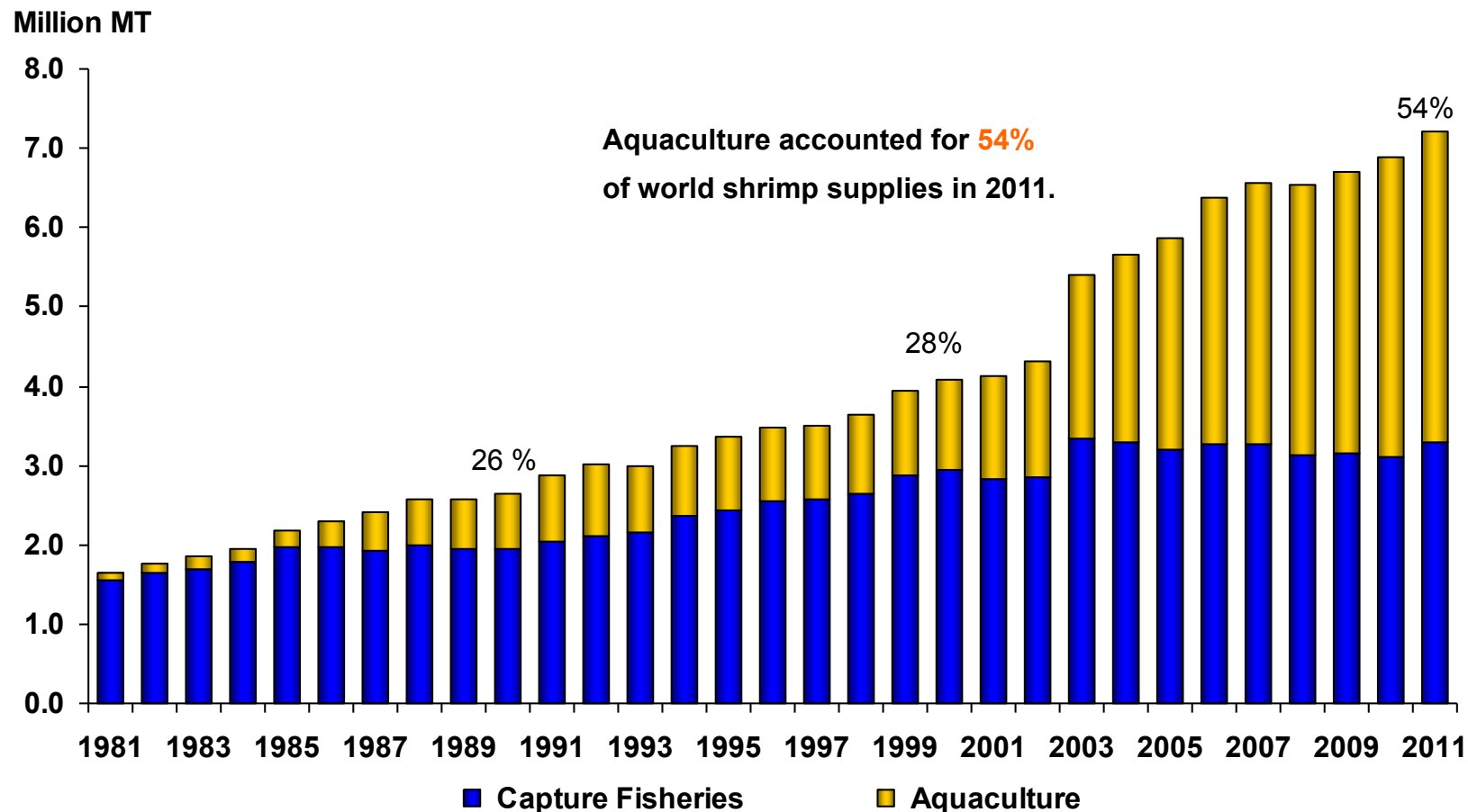
World Landings of Wild-Caught Shrimp by Species



Source: FAO (2013).

World Production of Shrimp

Capture Fisheries & Aquaculture



Source: FAO (2013).

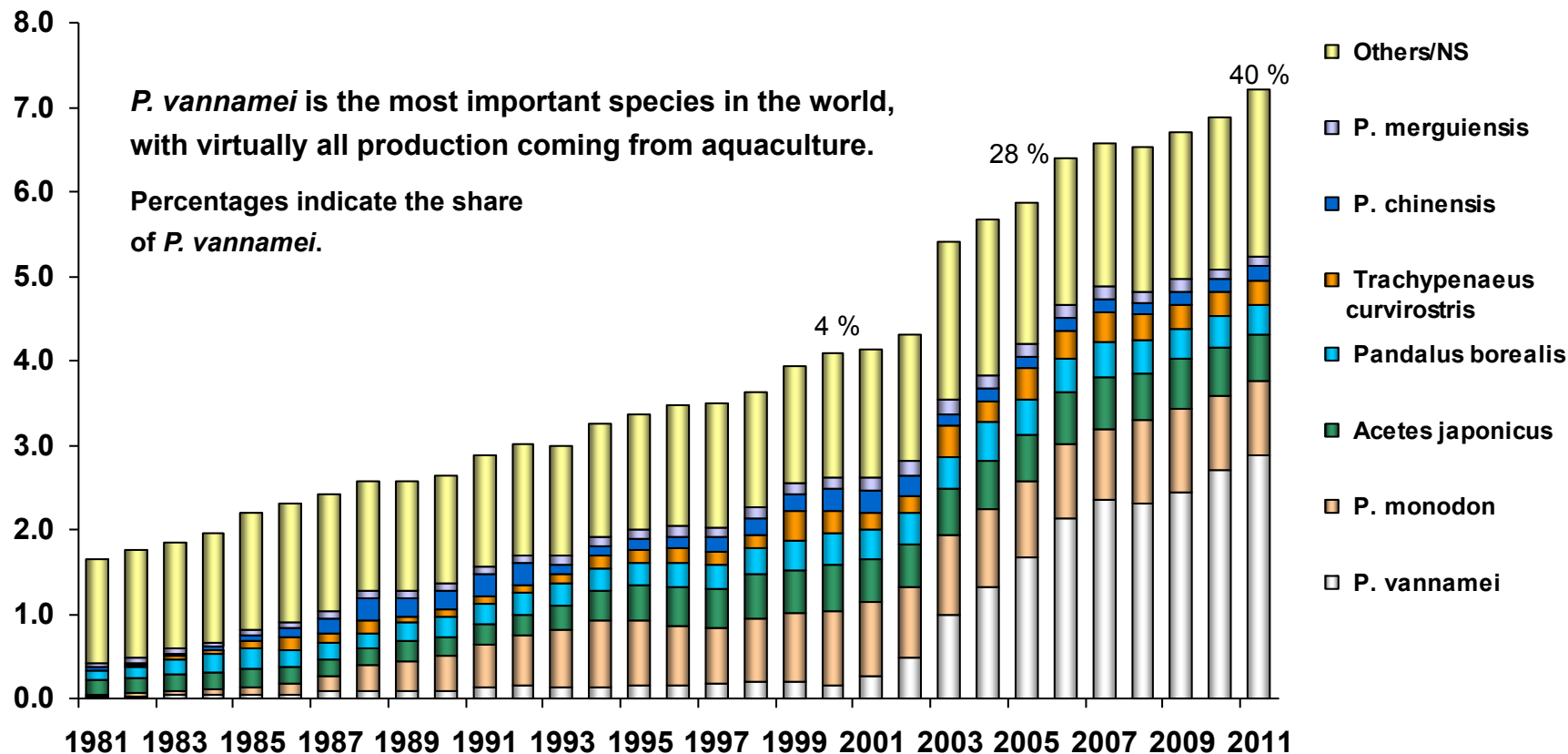
Notes: *M. rosenbergii* is not included.

China includes freshwater production of *P. vannamei*.

World Production of Shrimp by Species

Capture Fisheries & Aquaculture Combined

Million MT

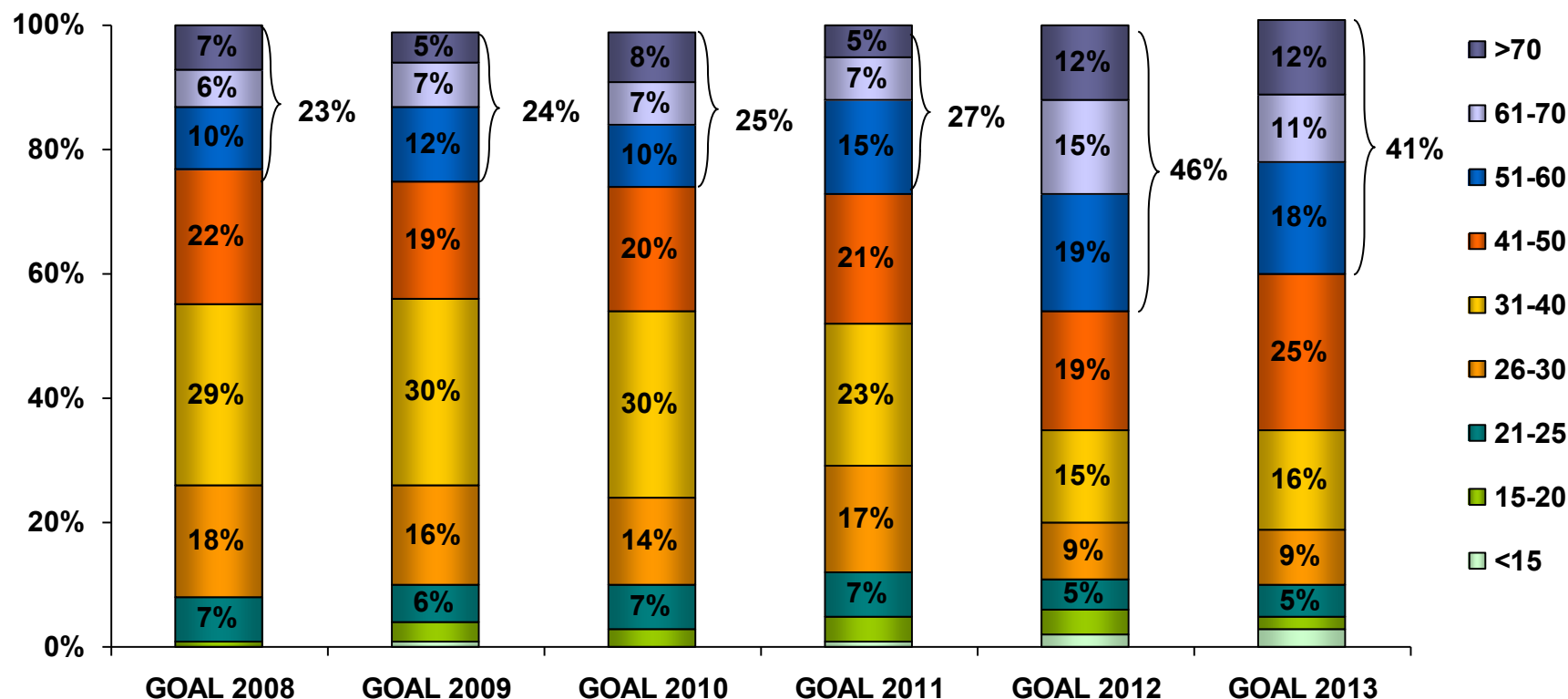


Source: FAO (2013).

Notes: *M. rosenbergii* is not included.

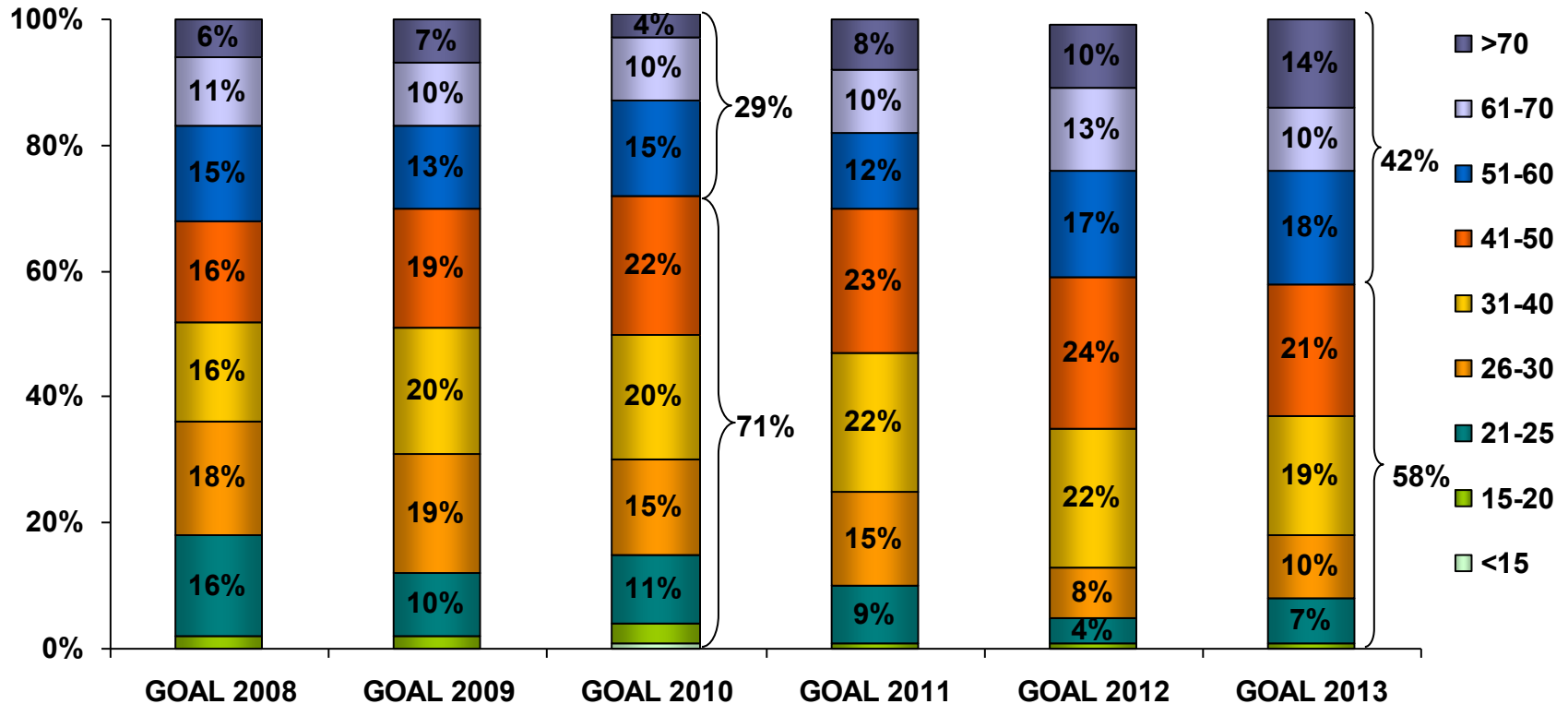
Freshwater production of *P. vannamei* in China is included.

Composition of Shrimp Aquaculture Production by Size Categories – Comparison of Survey Data for Asia



Disease problems in Asia led to the harvesting of smaller sizes in 2011 and 2012.

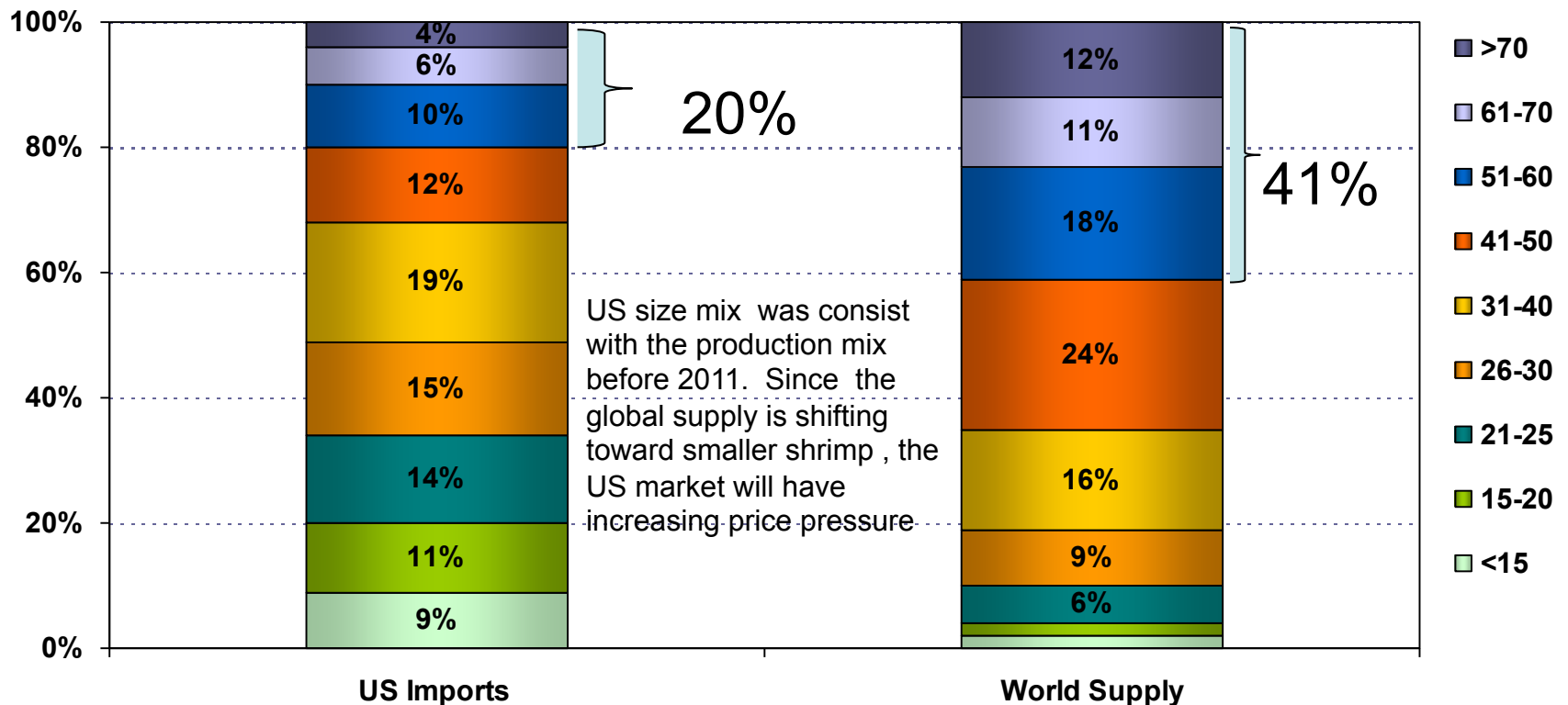
Composition of Shrimp Aquaculture Production by Size Categories – Comparison of Survey Data for the Americas



There is also a trend towards smaller sizes in Latin America.

GOAL 2013 Survey

Composition of Shrimp Aquaculture Production by Size Categories – Aggregate 2012



Source: GOAL (2013).

Expected Trends in Shrimp Aquaculture Size Categories - GOAL Survey 2013

Size Category	Asia	Americas	World
<15	Decrease/Stable	Stable	Decrease/Stable
15-20	Stable	Stable	Stable
21-25	Stable	Increase/Stable	Stable
26-30	Stable	Stable	Stable
31-40	Decrease/Stable	Increase	Stable
41-50	Decrease/Stable	Stable	Decrease/Stable
51-60	Decrease	Stable	Decrease
61-70	Stable	Stable/Decrease	Stable
>70	Increase	Decrease	Increase

China expects increased production of >70 shrimp while Ecuador foresees a shift from smaller to larger counts.

Expected Trends in Shrimp Aquaculture

Product Form - GOAL Survey 2013

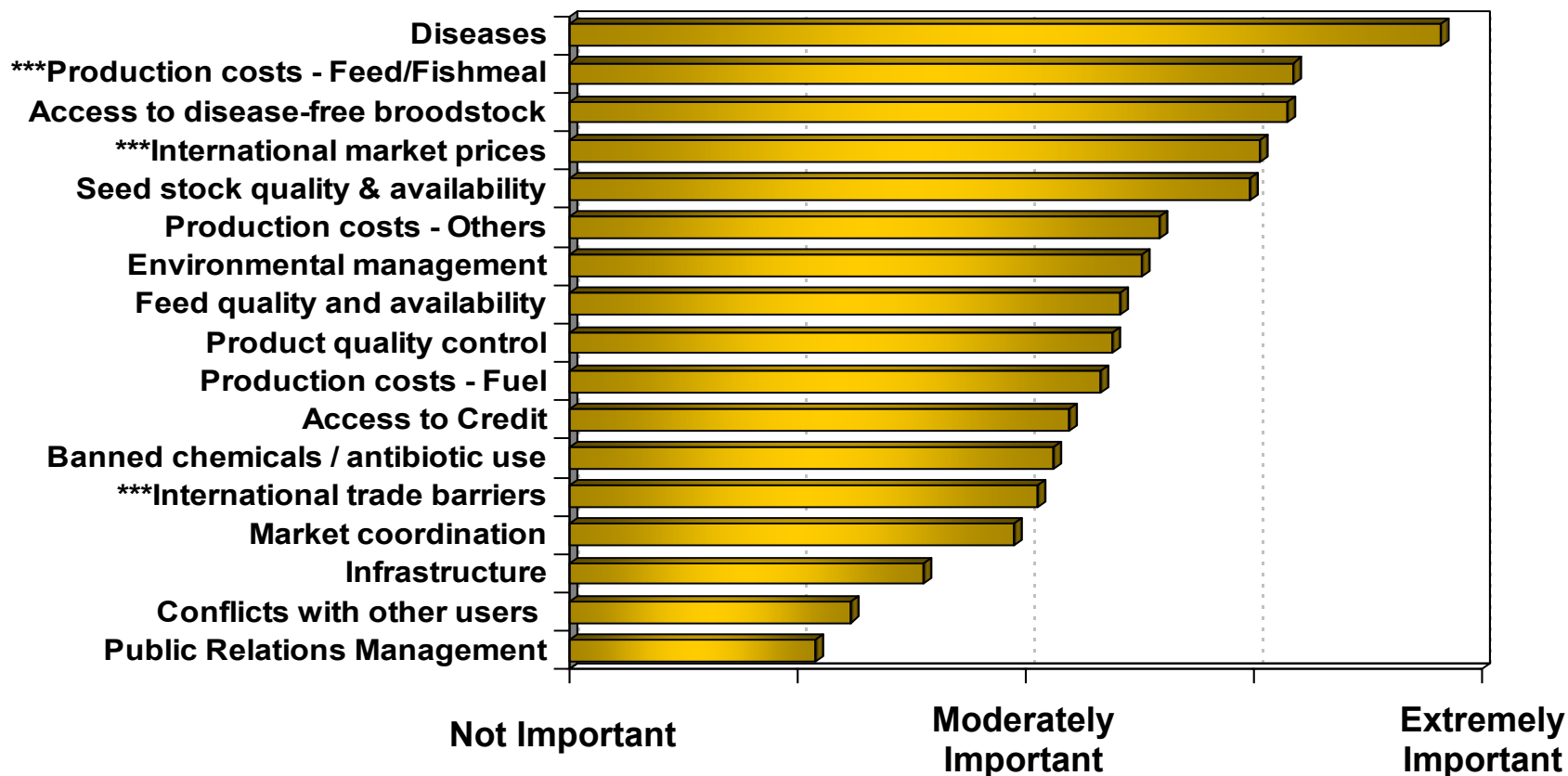
Product Form	Asia	Americas	World
Green / Head-on	Stable/Decrease	Increase	Stable
Green / Head-off	Stable/Decrease	Stable/Decrease	Stable/Decrease
Peeled	Stable	Increase	Stable
Cooked	Stable	Increase	Stable
Breaded	Increase	Increase	Increase
Other Forms	Stable/Increase	Increase	Stable/Increase

Production of green/head-off shrimp relative to other product forms will decrease in Ecuador.

GOAL 2013 Survey

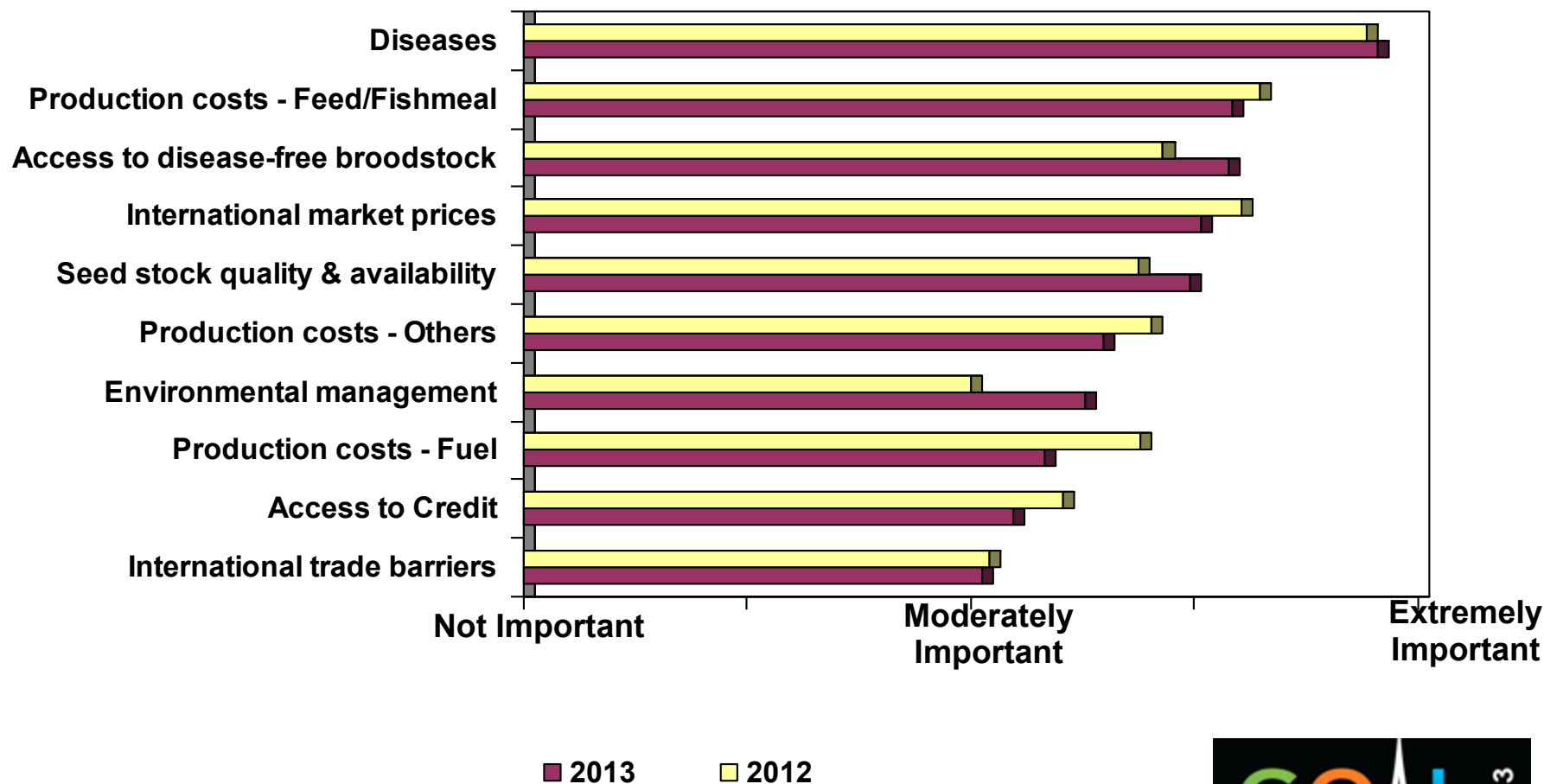
Issues & Challenges in Shrimp Aquaculture

All Countries



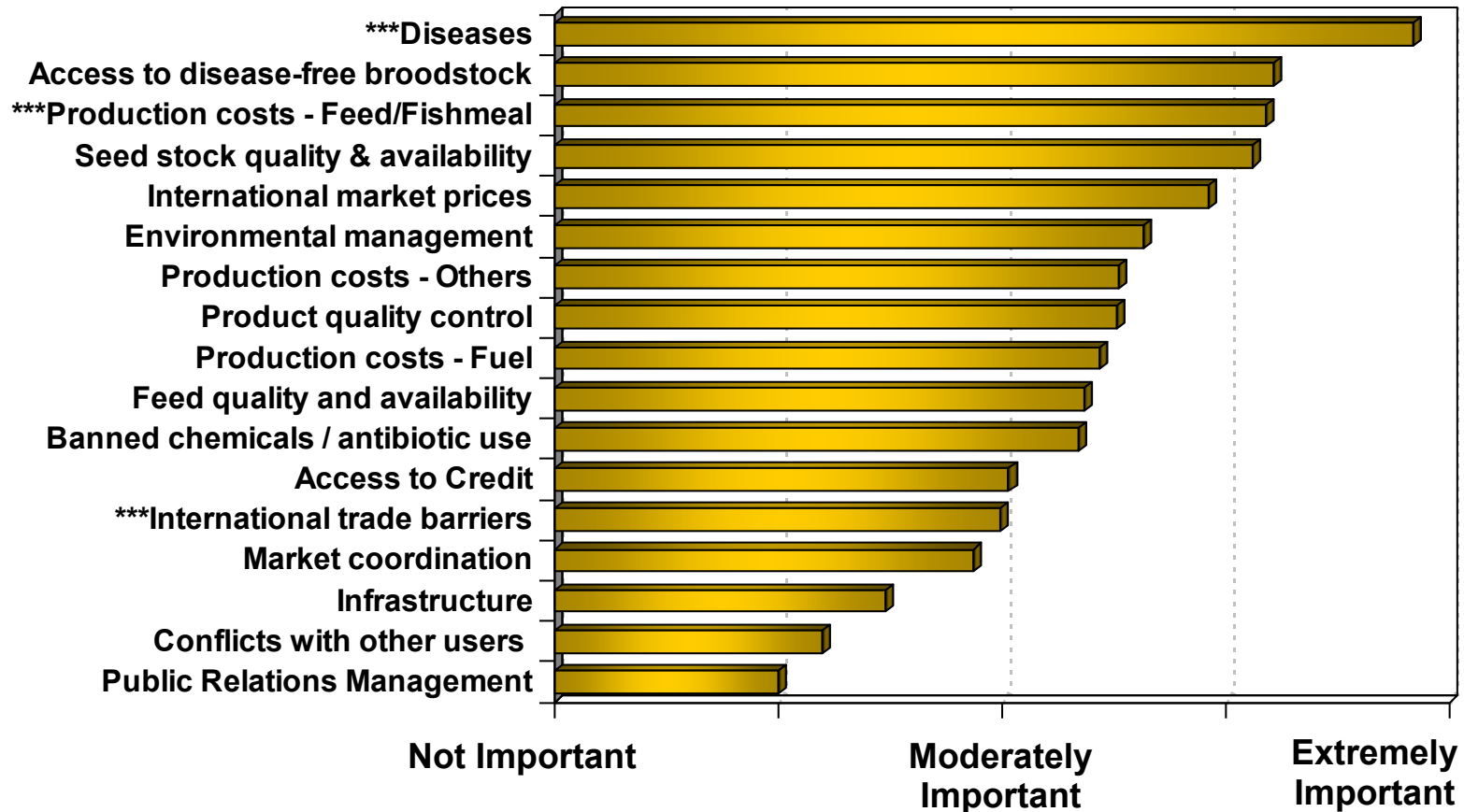
Asterisk indicates a Top 3 issue in GOAL 2007 Survey

Worldwide Top Issues & Challenges in Shrimp Aquaculture: 2013 Survey vs. 2012 Survey



GOAL 2013 Survey

Issues & Challenges in Shrimp Aquaculture - Asia

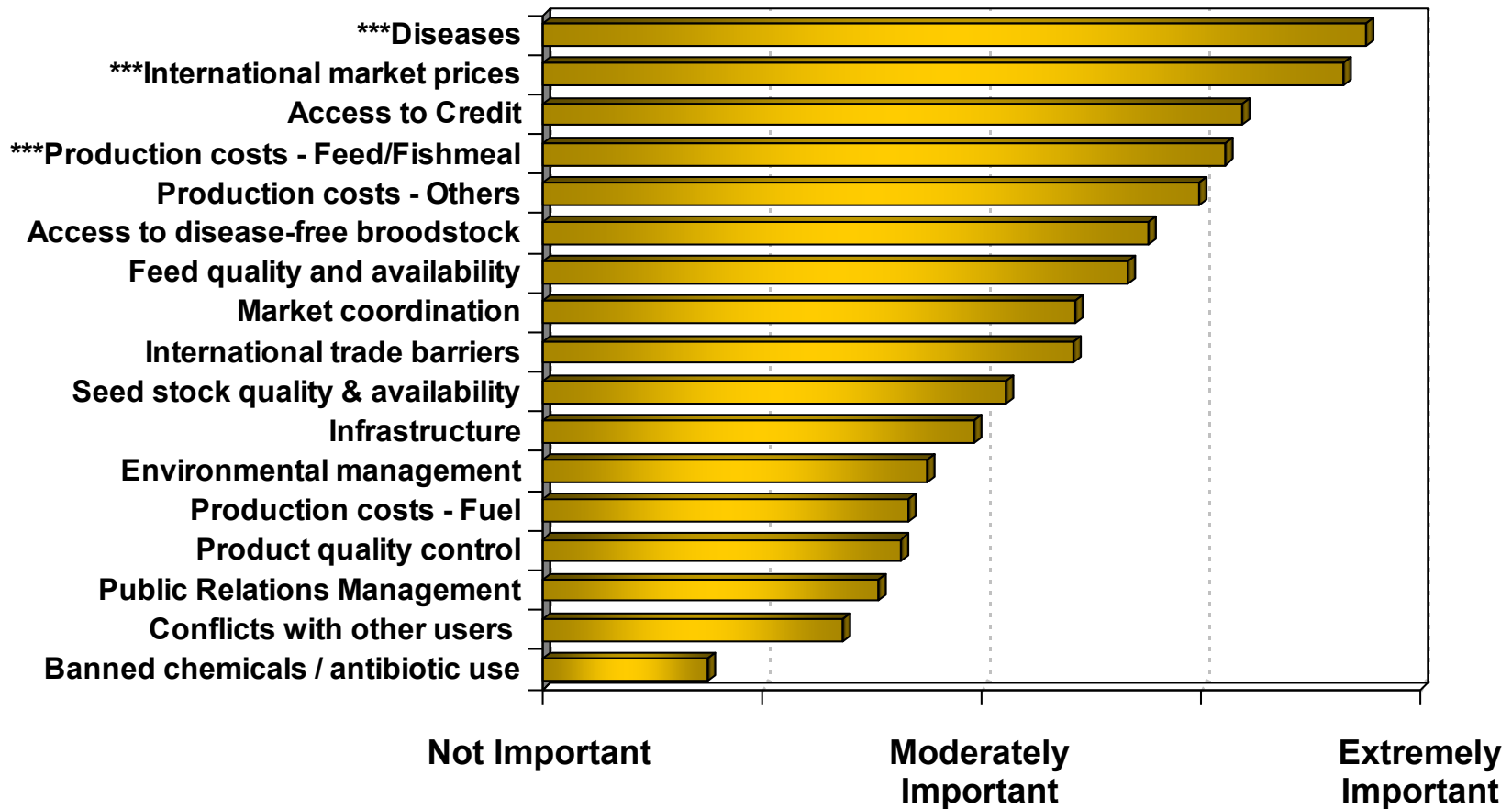


Asterisk indicates a Top 3 issue in GOAL 2007 Survey

GOAL 2013 Survey

Issues & Challenges in Shrimp Aquaculture

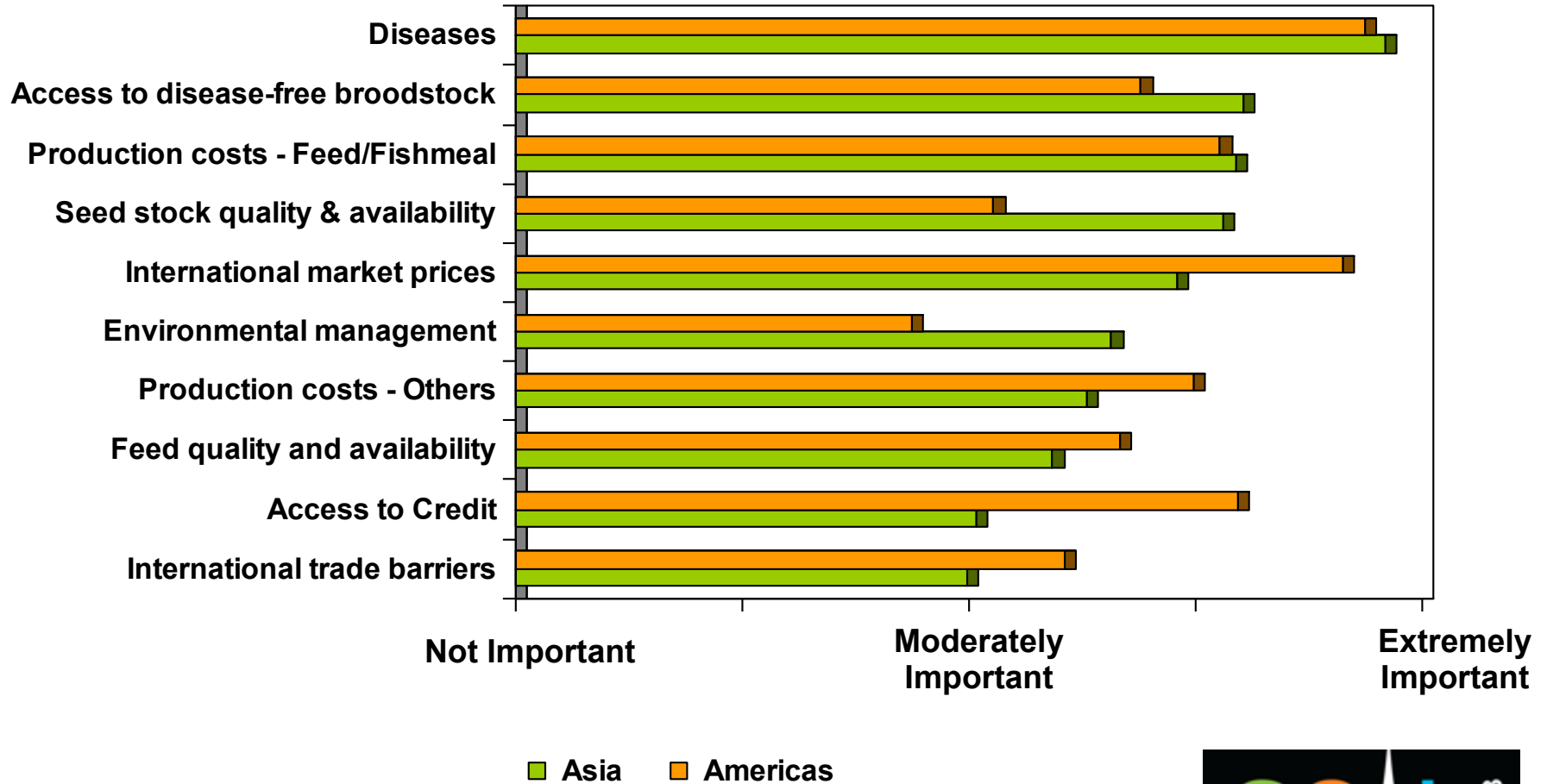
Latin America



Asterisk indicates a Top 3 issue in GOAL 2007 Survey

GOAL 2013 Survey

Top Issues & Challenges in Shrimp Aquaculture Asia vs. Latin America



GOAL 2013 Survey

Global economic conditions will be better in 2014 compared to 2013

Outlook	Asia	Americas	Others
Strongly Agree		Belize, Cuba, Ecuador, Jamaica	
Agree	Bangladesh, China, India, Taiwan	Brazil, Colombia, Dominican Rep., El Salvador, Guatemala, Mexico, Nicaragua, Peru	
Neutral/No Opinion	Indonesia, Malaysia, Myanmar, Philippines, S. Korea, Thailand, Vietnam	Costa Rica, Honduras, Panama, Venezuela	Australia, New Caledonia
Disagree			Egypt
Strongly Disagree			

GOAL 2013 Survey

Feed prices will be lower in **2014** compared to **2013**

Outlook	Asia	Americas	Others
Strongly Agree			
Agree	Vietnam	Brazil, El Salvador	
Neutral/No Opinion	S. Korea	Colombia, Costa Rica	
Disagree	Bangladesh, China, India, Indonesia, Malaysia, Myanmar, Taiwan, Thailand	Belize, Cuba, Dominican Rep., Ecuador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Venezuela	Australia, Egypt
Strongly Disagree	Philippines	Peru	New Caledonia

GOAL 2013 Survey

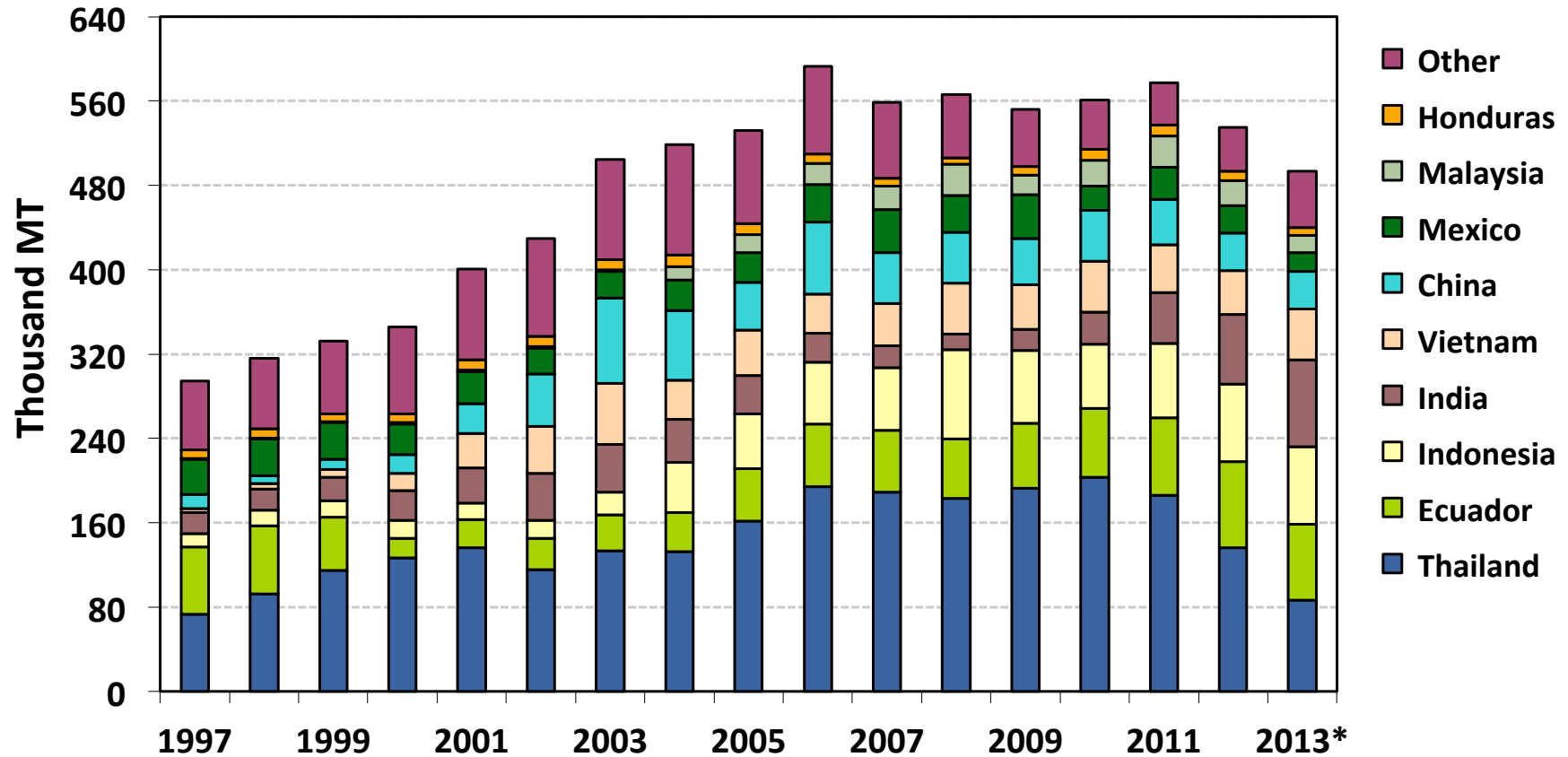
The global shrimp market will strengthen in 2014 compared to 2013

Outlook	Asia	Americas	Others
Strongly Agree	Myanmar, Taiwan	Ecuador, Jamaica	
Agree	Bangladesh, China, Philippines, Thailand, Vietnam	Belize, Brazil, Colombia, Cuba, Dominican Rep., El Salvador, Guatemala, Panama, Peru, Venezuela	New Caledonia
Neutral/No Opinion	India, Indonesia, Malaysia, South Korea	Costa Rica, Honduras	
Disagree		Mexico, Nicaragua	Australia, Egypt
Strongly Disagree			

Trends in Trade: US, Japan, EU (France, Spain)

U.S. Shrimp Imports

Down over 15% since 2011



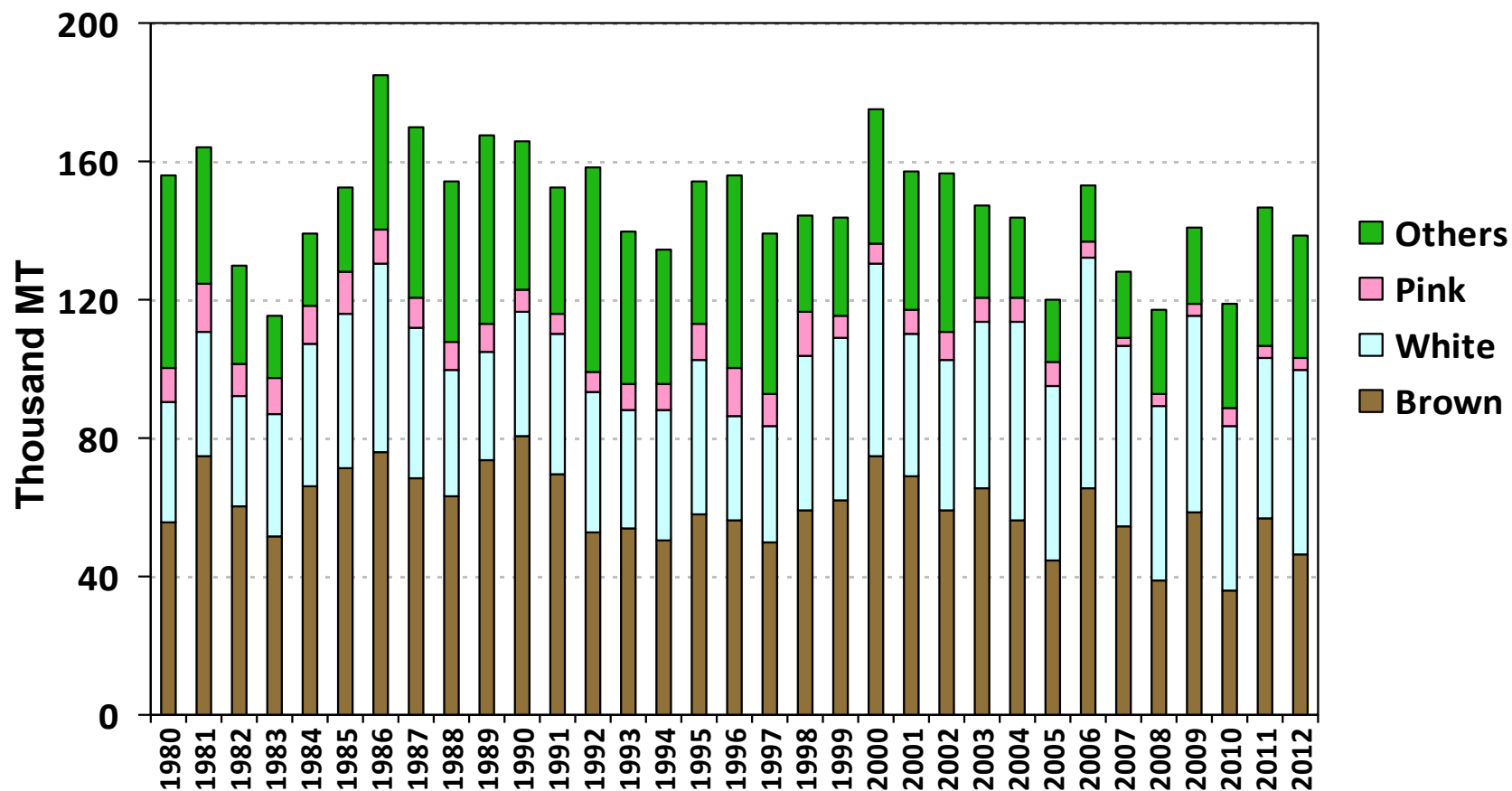
After peaking in 2010 at 203,000 tons, imports from Thailand declined in 2011 and 2012 and are expected to fall even further in 2013 to around 90,000 tons. Ecuador, Indonesia, and India are picking up some of the slack. Imports from Mexico have also fallen.

Source: USDC/NMFS (2013)

* Estimate

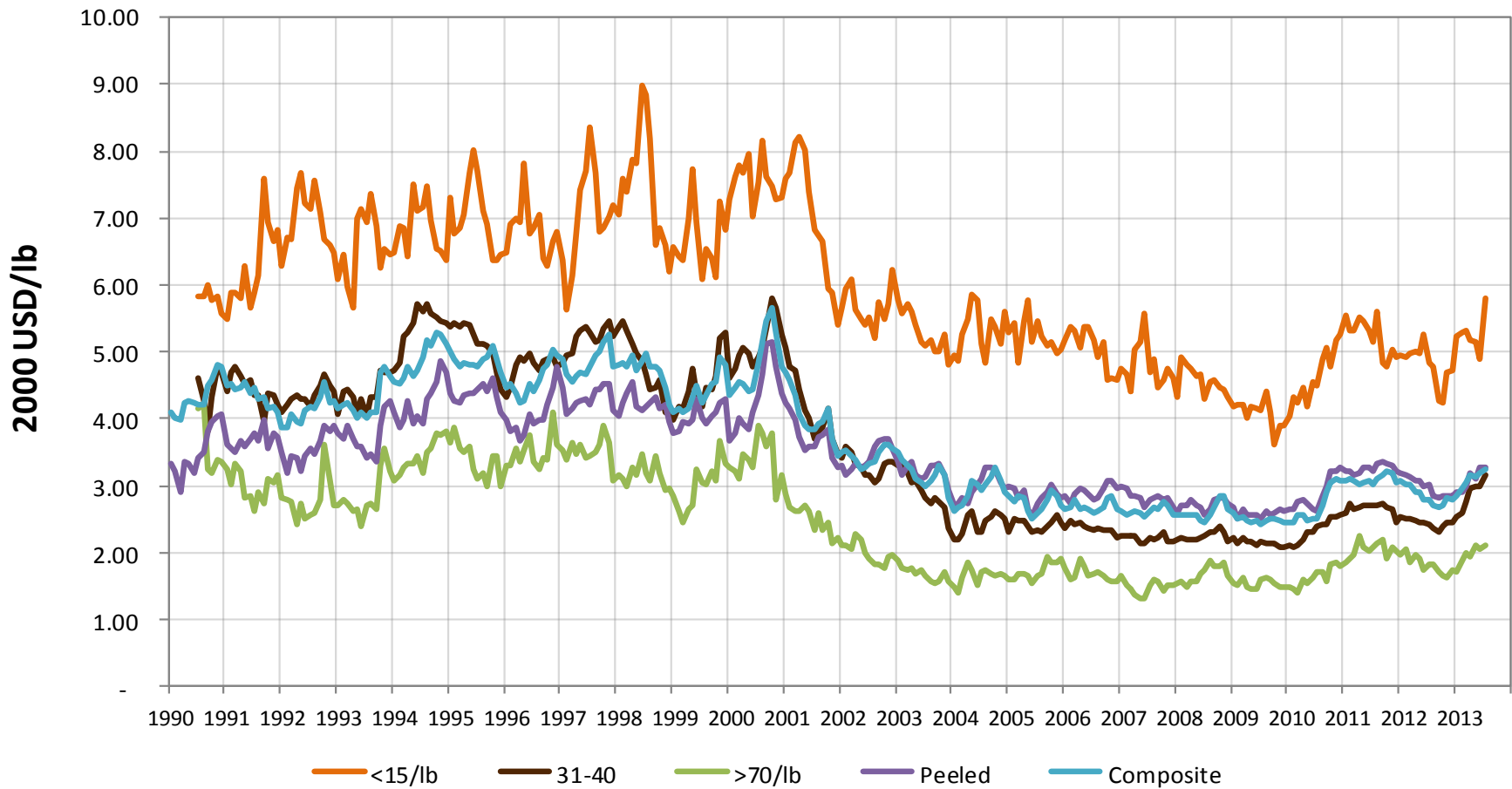


U.S. Landings of Wild-Caught Shrimp



Source: USDC/NMFS (2012)

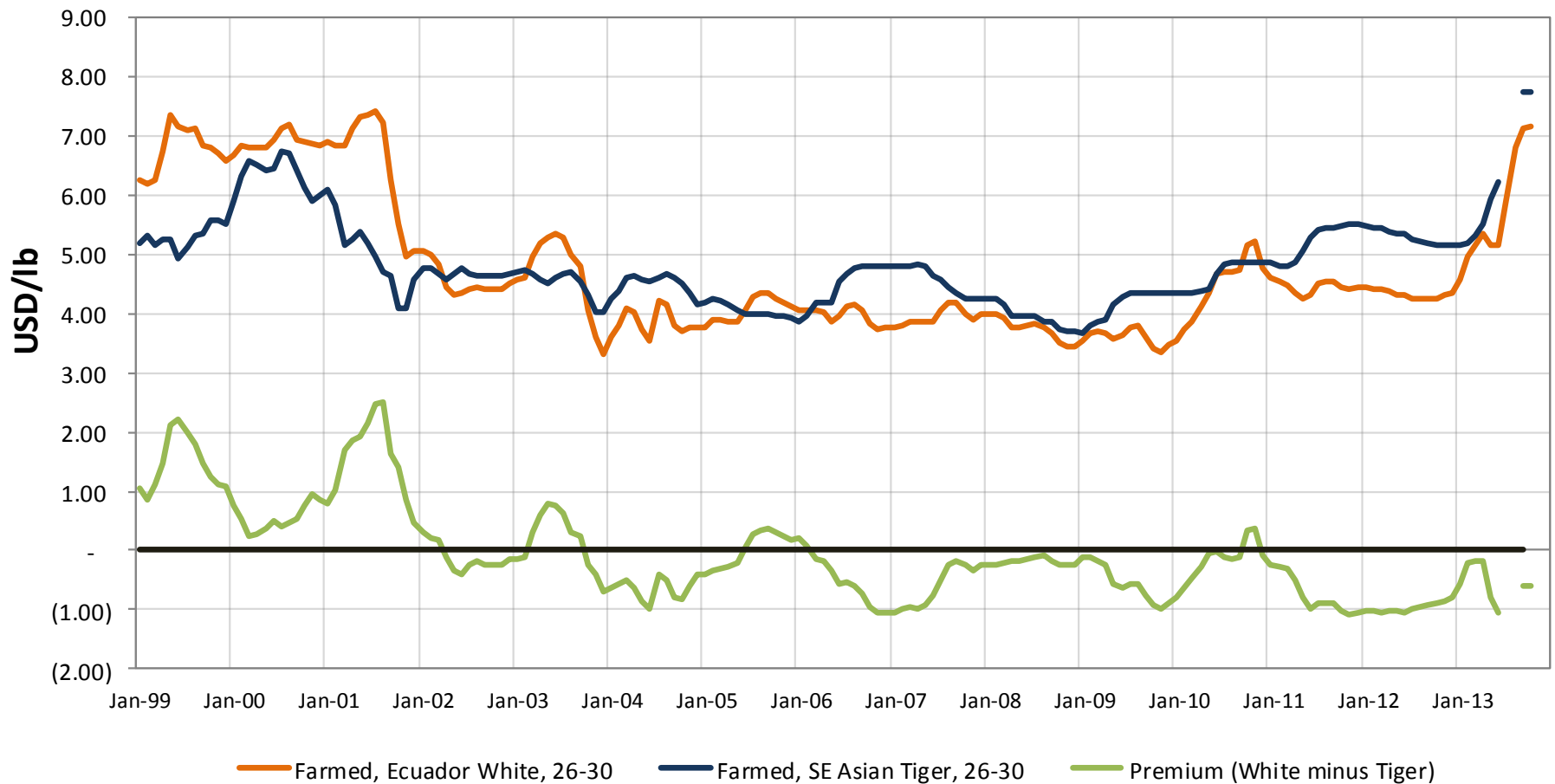
Trends in U.S. Shrimp Import Prices



Real prices have been increasing since 2010.

P. monodon vs. *P. vannamei*

U.S. Wholesale Prices

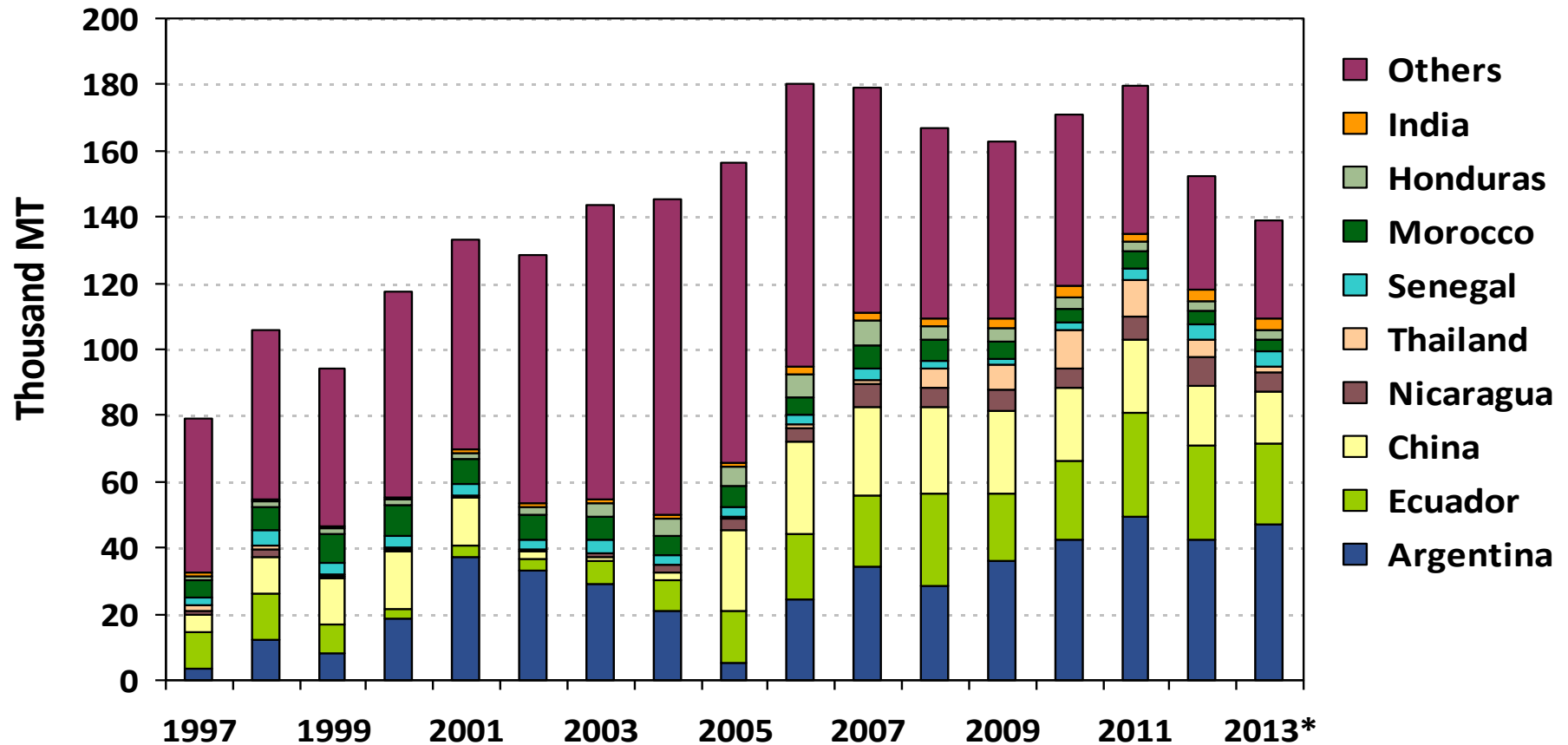


Wholesale shrimp prices have been rising since 2010 but increased sharply during 2013, reflecting the reduced availability of imported shrimp in the U.S. market as a result of EMS/AHPNS.



Spanish Shrimp Imports

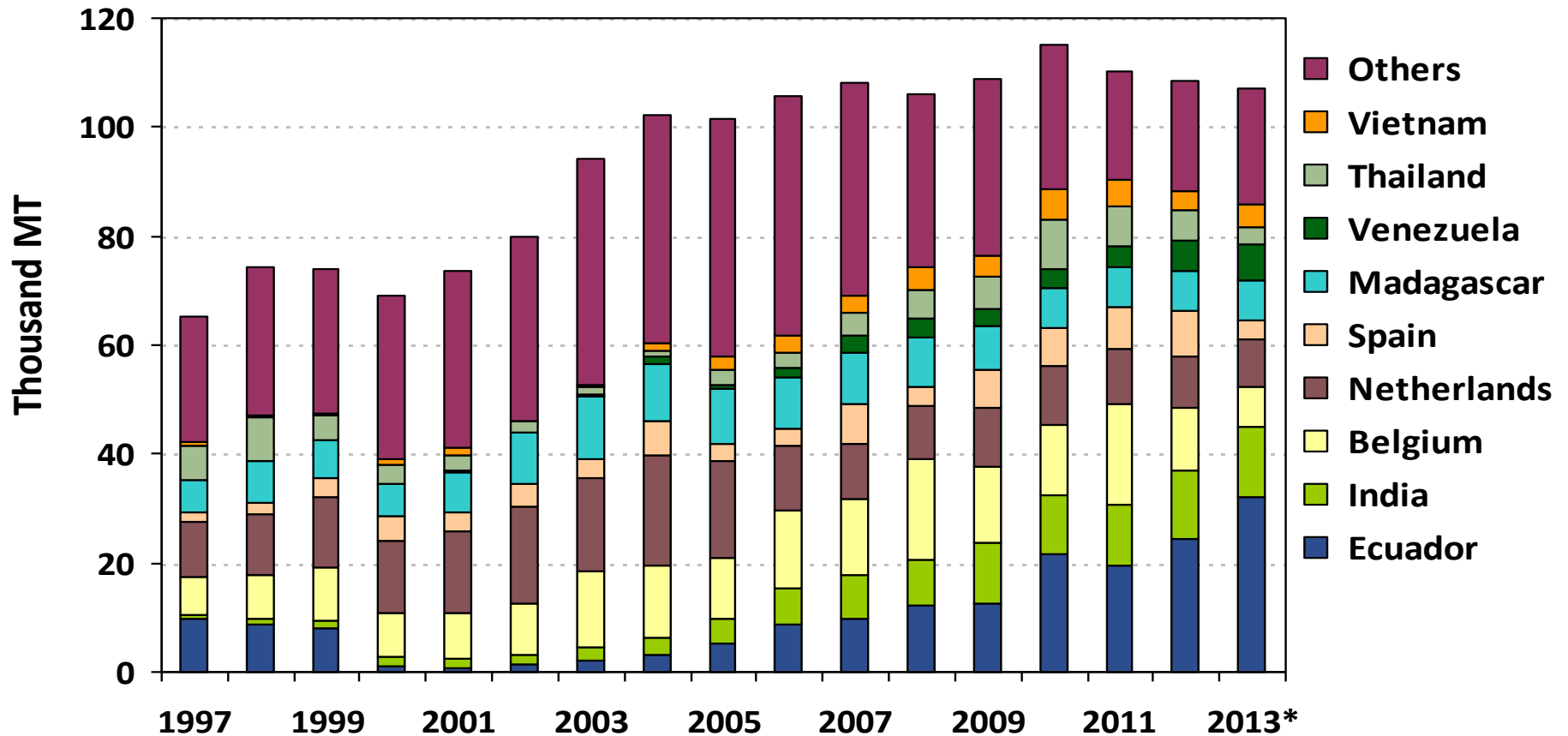
Down 22% since 2011



Reflecting the difficult economic conditions in the country, the Spanish market contracted substantially in 2012 and is expected to contract even further in 2013 (-20% relative to 2011). Argentina and Ecuador currently supply around 50% of the market.

French Shrimp Imports

Down 3% since 2011



Ecuador's exports to France have increased dramatically since 2001, currently accounting for approximately 30% of the import market. Ecuador is also increasing shipments to Asian markets (China, Vietnam).



Source: Eurostat (2013)

* Estimate

Conclusion

2013 production is **15% less** than 2011

23% less than the expected for trajectory for 2013 based on the past decade

Disease

Biggest Risk, Undermines market development,
Under-investment in disease management



Thank You

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