Summary of Day 1

Sessions

George Chamberlain
Dr. Wimol Jantrarotai

Thailand Department of Fisheries
Thailand

Dr. Wimol Jantrarotai has been Director General of the Thailand Department of Fisheries since 2009.

He formerly served as director of the Fisheries Foreign Affair Division of the Department of Fisheries and Inspector General in Thailand's Ministry of Agriculture and Cooperatives.

From 1981 to 1997, Dr. Wimol was a fisheries biologist in the Department of Fisheries, where he worked on responsible feed for aquaculture.

Dr. Wimol holds doctorate and master's degrees in fisheries and allied aquaculture from Auburn University in the United States. His bachelor's degree in aquaculture was awarded with honors from Kasetsart University in Thailand.
Wally Stevens

Global Aquaculture Alliance
United States

Wally Stevens, GAA’s executive director and 35-year veteran of the seafood Industry, has helped expand the Best Aquaculture Practices program.

Previously, Stevens was president of Ocean Products, a salmon aquaculture company, and president of U.S.-based Slade Gorton & Co. until retiring in 2006.

Stevens has also served as chairman of the National Fisheries Institute, where he helped establish the Future Leaders program.
Average Annual Percentage Growth
(«Double in a decade» requires 7.2% annual growth)

Finfish "Not On track" the last years

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<td>Percent growth</td>
<td>9.1</td>
<td>9.0</td>
<td>11.4</td>
<td>10.4</td>
<td>18.2</td>
<td>14.4</td>
<td>9.8</td>
<td>0.2</td>
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Global Outlook for Aquaculture Leadership
BANGKOK 2012

4
Chingchai Lohawatanakul

Charoen Pokphand Foods Public Co., Ltd.
Thailand

Dr. Chingchai Lohawatanakul is President and Vice Chairman of Charoen Pokphand Group’s Agro-Industry and Foods Business. He is also Executive Committee Chairman of Charoen Pokphand Foods Public Co. Ltd. and its past president, V.P. and CEO. He has a master’s degree in microbiology and a bachelor’s degree in agricultural chemistry from Arizona State University, as well as honorary doctorates from Kasetsart University, Prince of Songkhla University and Maejo University.
Sustainability Issues

- Genetics
- Nutritions
- Management & Disease Control
- Environment
  - Industrial Pollution
  - Fossil-Fuel & CO$_2$ Emission
LifeUme
Achievement
Award

• Dr. Lin recognized the opportunity of aquaculture, applied sound science, trained poor farmers, and built a broad, multi-species, integrated, and sustainable business throughout Asia
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.

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

His recent work has focused on the role of seafood in food security, constraints to aquaculture development and seafood market analysis.
Fish to 2030 Forecasts

- Global consumption rises to 22.5 kg/y
- Global consumption remains at 1996 levels (15.6 kg/y)
- Technological advances in aquaculture
- Baseline scenario
- Ecological collapse of fisheries

Source: Hall, S. Blue Frontiers (2011), WorldFish Centre
GOAL 2012 Survey

World Shrimp Aquaculture (including *M. rosenbergii*)
by Species: 1992 - 2014

Ragnar Tveteras

University of Stavanger
Norway

Professor Ragnar Tveteras is a business economist at the University of Stavanger’s Department for Industrial Economics, Risk Management and Planning. His research focuses primarily on aquaculture and seafood markets. The writer and lecturer maintains relationships with authorities and private decision makers at the regional, national and international levels.
Annual Percent Growth Rates
2009-2012

-44.4  -31.6  -25.3  3.9  12.0  15.2
-2.9  11.7  14.9
-0.3  12.0
-1.1  11.8
-17.8  13.7
-11.9  17.3
-8.3  15.2
-31.6  20.7
-44.4  -31.6  -25.3  3.9  12.0  15.2
-2.9  11.7  14.9
-0.3  12.0
-1.1  11.8
-17.8  13.7
-11.9  17.3
-8.3  15.2
-31.6  20.7

Tilapia
Atlantic salmon
Coho salmon
Rainbow trout
Pangasius, Vietnam
Channel Catfish

2012-2013
2011-2012
2010-2011
Phillip Hsia

DaChan Greatwall Group
China

Phillip Hsia is chief financial investment officer of DaChan Greatwall Group, one of Asia’s largest integrated food producers.

He specializes in macroeconomic and financial analysis, and leads a team managing foreign exchange hedging, index option trading and business investment valuation.

Hsia was previously an analyst with Goldman Sachs Global Investment Research in New York.

He’s also an accomplished Go player.
Remarks on Global Economy

- Long-term seafood market growth drivers:
  (a) The rise of middle income class in Asia Pacific
  (b) The increasing consumption intensity per person

- Near-term challenges:
  (a) Anemic growth prospects in the advanced economies
  (b) Structural rebalance will significantly slow the economic growth rate in China

- Seafood market opportunities
  (a) Niche market – organic
  (b) Demand migration from large to smaller size
Early Mortality Syndrome Panel
Donald Lightner

University of Arizona
USA

Prof. Donald Lightner is a pathologist in the University of Arizona’s Department of Veterinary Science and Microbiology, where he directs an OIE reference laboratory for shrimp diseases.

His research deals with virology, histology, toxicology, electron microscopy and other tools for disease diagnosis, pathogen characterization and treatment.

He also has been instrumental in the prevention of disease through nutrition, immunology and development of specific pathogen-free shrimp.
Rohanna Subasinghe

United Nations Food & Agriculture Organization

Italy

Dr. Rohana Subasinghe, senior aquaculturist at the FAO’s Fisheries and Aquaculture Department, analyzes current and future trends in aquaculture development and management. He also serves as the technical secretary to the FAO Committee on Fisheries’ Sub-Committee on Aquaculture. He was instrumental in developing the FAO Aquaculture Certification Guidelines and is currently working on an assessment framework for their conformity with certification schemes.
Chadag Mohan

Network of Aquaculture Centres in Asia Pacific

India

Dr. Chadag Mohan is the research and development program manager for the Network of Aquaculture Centres in Asia-Pacific and coordinates its Aquatic Animal Health Program. He holds a doctorate in aquatic animal pathology from the University of Stirling’s Institute of Aquaculture and is a fish pathology professor at the College of Fisheries in Mangalore, India, where he is also involved with aquaculture research. He is also chairman of the Fish Health Section of the Asian Fisheries Society.
Tim Flegel

Mahidol University
Thailand

For the past decade, Dr. Tim Flegel has led about 70 research scientists and post-graduate students at the Center of Excellence for Shrimp Molecular Biology and Biotechnology (Centex Shrimp), a joint operation of the Faculty of Science, Mahidol University and the National Science and Technology Development Agency.

He now serves as an NSTDA advisor and continues to research shrimp pathology and defense mechanisms.
Case Study on Infectious Salmon Anemia Virus Outbreak in Chile

- Growth will continue but at lower rates
- Acquisitions and mergers of companies
- New market consolidations
- All producers certified
- Zonal management based on indicators of carrying capacity
- Human capital building
Early Mortality Syndrome

- Affects shrimp in first 10-40 days after stocking
- Mortality rate: 40-90%
- Affects white shrimp (*L. vannamei*) and black tiger shrimp (*P. monodon*)
- Survivors display slow growth
Spread of EMS/AHPNS in East and SE Asia
Juvenile *Penaeus vannamei* from Vietnam. Left with EMS; right appears normal.
Possible Etiological Agents – What We Know to Date:

- Severe HP dysfunction followed by a terminal *Vibrio* infection of the HP.
- *Vibrio* spp. may not be the agent of AHPNS as the terminal, bacterial phase of EMS appears to be opportunistic.
- Feeds (e.g. a new ingredient) tested do not cause AHPNS.
- Cypermethrin in aqueous static renewal bioassays or when added to soil does not cause AHPNS in lab trials.
- Tests for an infectious agent (viral, bacterial, parasitic agents) have been negative to date.
2 phage bacterium pairs in hand

- One is our Rayong phage probably with *V. parahaemolyticus*
- Another phage in another lab (wishes to remain anonymous) probably with *V. fluvialis*
- Preliminary results for both pairs give no or low mortality with bacterial injection alone
- Some mortality with undiluted phage produced from bacterial cultures
- 100% mortality within 24 hours upon injection of bacterium plus phage
- These tests need to be repeated with diluted phage to confirm and to reproduce AHPNS
Biosecurity at pond/farm level

- Avoiding high risk practices (live feeds; co-cultivation, unregulated movement)
- Implementing pathogen exclusion practices (SPF broodstock, water treatment e.g., filtration, disinfection)
- Reduce stress in production practices
- Employ disease containment practices (good sanitation, bird netting)
- Implement BMPs (stocking larger sizes, probiotics, bioflocs)
John Lindblom

American Soybean Association – International Marketing
United States

John Lindblom is Regional Director-East Asia of the American Soybean Association - International Marketing, based in Singapore.

Prior to joining ASA in 1998, John was the managing director of Solvay Animal Health Asia/Pacific, a Belgian corporation, and responsible for its animal health business in the region.

He holds a Master’s Degree in International Management from the American Graduate School of International Management in the United States.
Soybeans

• For the first time in more than three decades, the U.S., Brazil, Argentina and Paraguay suffered droughts in the same calendar year.

• South American soybean production in 2012 was reduced by 22.2 mmt or 16.3% versus 2011.

• U.S. soybean production was reduced by 6.35 mmt or 7.5% versus 2011. (This may change in final USDA estimates).

• In total, soybean production in North and South America in 2012 was 27.45 mmt less than in 2011.
BAP Standards Oversight Committee Meeting
Thank You!