Chantal Andriamilamina

International Finance Corp.

Chantal Andriamilamina is a principal investment officer at the International Finance Corp. and a member of IFC’s global agribusiness team. She has 15-plus years of experience financing private-sector investments in emerging markets, with a strong focus on agribusiness, consumer services and infrastructure. She is currently leading IFC’s business development and investment activities in the seafood sector. She has an MBA from Northwestern University.
Aquaculture in IFC’s Agribusiness Strategy

Chantal Andriamilamina
IFC - Global Agribusiness
Aquaculture in IFC’s Agribusiness Strategy

GOAL 2012, Thailand
November 1st, 2012

Chantal Andriamilamina
Principal Investment Officer
IFC - Global Agribusiness
Agenda

I. About IFC
II. IFC in Agribusiness
III. The case for investing in Aquaculture
IV. IFC Products and Value Addition
I. About IFC
IFC is a Member of the World Bank Group

**IBRD**
International Bank for Reconstruction and Development  
Est. 1945

**IDA**
International Development Association  
Est. 1960

**IFC**
International Finance Corporation  
Est. 1956

**MIGA**
Multilateral Investment and Guarantee Agency  
Est. 1988

**Role:**
- To promote institutional, legal and regulatory reform
- To promote institutional, legal and regulatory reform
- To promote private sector development
- To reduce political investment risk

**Clients:**
- Governments of member countries with per capita income between $1,025 and $6,055.
- Governments of poorest countries with per capita income of less than $1,025
- Private companies in member countries
- Foreign investors in member countries

**Products:**
- Technical assistance
- Loans
- Policy Advice
- Technical assistance
- Interest Free Loans
- Policy Advice
- Equity/Quasi-Equity
- Long-term Loans
- Risk Management
- Advisory Services
- Political Risk Insurance

**Shared Mission:** To Promote Economic Development and Reduce Poverty
Over US$150 billion Invested in Emerging Markets since 1956

- Largest multilateral source of loan/equity financing for the emerging markets private sector
- Founded in 1956 with 182 member countries
- AAA rated by S&P and Moody’s
- Equity, quasi-equity, loans, risk management and local currency products
- Takes market risk with no sovereign guarantees
- Promoter of environmental, social, and corporate governance standards
- Resources and know-how of a global development bank + flexibility of a merchant bank
- Holds equity in over 800 companies worldwide

**IFC FY12 Highlights**

<table>
<thead>
<tr>
<th>Portfolio</th>
<th>* US$ 55.2 billion</th>
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</thead>
<tbody>
<tr>
<td>Committed</td>
<td>* US$ 18.7 billion</td>
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<tr>
<td>Mobilized</td>
<td>US$ 6.5 billion</td>
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</tbody>
</table>

* Including IFC’s own account and mobilization

**Composition of FY12 Transaction Volume (US$12.2 bn)**

- Sub-Saharan Africa: 18%
- Middle East & N. Africa: 13%
- Europe & Central Asia: 22%
- East Asia and the Pacific: 16%
- Latin America & Caribbean: 25%
- South Asia: 6%
- Global: 1%
II. IFC in Agribusiness
A US$5 billion Well-Diversified Agribusiness Portfolio

REGIONAL BREAKDOWN

- East Asia, 23%
- Latin America, 26%
- Middle East/ North Africa, 20%
- South Asia, 9%
- Africa, 9%

SECTORAL BREAKDOWNS

- Dairy Products, 11.3%
- Veg. Fats and Oils, 11.3%
- Food retail, 11.0%
- Fertilizers, 10.0%
- Fruits and Vegetables, 9.7%
- Grains and Milling, 9.2%
- Animal Processing, 9.2%
- Other Agri, 7.3%
- Food infrastructure, 4.0%
- Agri Financial Markets, 4.0%
- Equity Funds, 3.0%
- Var. Foods, 14.5%
- Agri Infrastructure, 4.0%
- Other Agri, 7.3%
- Animal Processing, 9.2%
- Fruits and Vegetables, 9.7%
- Grains and Milling, 9.2%
Clients benefit from access to global expertise and IFC network of clients
From initial focus on Farmers and Food Processors...

- **Investment Climate**
- **Infrastructure, PPPs**
- **Input producers and distributors**
- **Traders**
- **Food Processors**
- **Distributors**
- **Retailers**
- **Consumers**
- **Financial/Risk Management Products**
- **Advisory/Technical Assistance**
- **Environmental and Social Ecosystem Services**

**Agri. Client Focused**
- Focused on Core Agribusiness Area - directly supporting Farmers and Processors
- Gradually expanding product range (e.g., advisory) to enhance impact

- **6+ billion**
To an Integrated Agribusiness Value Chain Approach

- Investment Climate
- Infrastructure, PPPs
- Financial/Risk Management Products
- Advisory/Technical Assistance
- Environmental and Social Ecosystem Services

Value Chain Focused

- Increased focus on interventions that enhance impact, e.g., Inputs, Warehouse Receipts, Financing, Risk Management, Infrastructure
- Use expanded product range to improve value proposition for target clients
- Scale up investments in intermediaries, e.g. traders, distributors and retailers
Food Security and Agribusiness continue to be IFC’s top strategic priority

• The Agribusiness Strategic Action Plan (ASAP) was launched in 2011 to: i) enhance Food Security; 2) promote inclusive economic development; and iii) make Environmental & Social standards a business driver

• An IFC-wide and World Bank-IFC integrated value chain approach have been adopted to help achieve these objectives

• In FY12, IFC invested US$ 4.2 billion in the agribusiness value chain globally

• The Global Agriculture and Food Security Program became operational in 2011

• Addressing Food Security is IFC’s #1 priority for FY13
III. The case for investing in Aquaculture
### The Global Agri. Landscape: key challenges and opportunities

<table>
<thead>
<tr>
<th>Demand for food and feed could increase by 70% by mid-century</th>
<th>Continued population growth</th>
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<tr>
<td></td>
<td>- Additional 2 billion people (34% growth) by 2050</td>
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<td></td>
<td>- 70% increase in food production needed by 2050</td>
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<tr>
<td></td>
<td>- Additional investment of US$83 billion p.a. needed, most of which would have to come from the private sector</td>
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<thead>
<tr>
<th>Dietary shift</th>
<th>- Continued increased per-capita caloric consumption</th>
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<tr>
<td></td>
<td>- Major shift in caloric sources: doubling or more of per-capita protein consumption in China, India, and Africa by 2030</td>
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<tr>
<th>Water scarcity</th>
<th>- Agribusiness accounts for 70% of freshwater consumption</th>
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<tr>
<td></td>
<td>- Forecasted 40% gap between water demand and supply by 2030 under business as usual conditions</td>
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<tr>
<th>Climate change</th>
<th>- Agribusiness and Forestry account for 30% of GHG emissions</th>
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<td></td>
<td>- Negative impact on crops expected from shifting weather patterns in tropical and Mediterranean regions</td>
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<tr>
<th>Bioenergy demand</th>
<th>- Biofuels and bio-energy major component of most current climate change mitigation strategies</th>
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<tr>
<td></td>
<td>- Potential acceleration of biofuel demand from peak oil</td>
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<tr>
<th>Forest conservation</th>
<th>- Stopping deforestation critical to climate change mitigation and biodiversity preservation</th>
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<tr>
<td></td>
<td>- Risk of further deforestation, 80% of new tropical agricultural land in last decade came from clearing forests</td>
</tr>
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</table>
### The Aquaculture Industry: strong market pressure for growth

<table>
<thead>
<tr>
<th>Continued strong growth in demand and production</th>
<th>Demographics and rising Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand for seafood products will continue to grow driven by population growth and increased per capita consumption</td>
<td></td>
</tr>
<tr>
<td>Doubling or more of per-capita protein consumption is expected in China, India, and Africa by 2030</td>
<td></td>
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</tbody>
</table>

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<tr>
<th>Capped wild seafood capture volumes</th>
</tr>
</thead>
<tbody>
<tr>
<td>The increase will come from aquaculture as wild catch volume is projected to remain at 1997 level</td>
</tr>
<tr>
<td>Aquaculture to account for over 50% of production in few years</td>
</tr>
</tbody>
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<tr>
<th>Comparative advantages</th>
<th>Nutrition quality</th>
</tr>
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<tbody>
<tr>
<td>Fish is a healthier alternative to other animal protein forms</td>
<td></td>
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<tr>
<th>Good economics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics are good with an overall low feed conversion ratio compared to other animal proteins, and better affordability for lower income consumers (for selected species)</td>
</tr>
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<thead>
<tr>
<th>Geographies / Emerging Markets Potential</th>
<th>Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in demand remains heavily concentrated in emerging markets</td>
<td></td>
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<tr>
<td>The seafood market is global and trade continues growing</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 91% of production are in emerging markets and no major shift in regional concentration is anticipated</td>
</tr>
<tr>
<td>New higher value seawater species are being farmed</td>
</tr>
</tbody>
</table>
## Enhanced Focus on Sustainability creates a role for development financiers

<table>
<thead>
<tr>
<th>Pressure towards Intensification of production systems</th>
<th>Scarcity of land and sea space</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>• Intensification is driven by competition for use of coastal and inland space</td>
</tr>
<tr>
<td></td>
<td>• It is expected to put increased pressure on ecosystems</td>
</tr>
<tr>
<td></td>
<td>• Production environments will be increasingly challenging</td>
</tr>
</tbody>
</table>

| Disease risks | • If not properly managed, intensification can increase the risk of devastating disease outbreaks, even in more mature sub-sectors |

<table>
<thead>
<tr>
<th>Technology development and transfer are critically important</th>
<th>Role of technology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Continued investment in improved technology is necessary to improve production efficiency and manage operational risks</td>
</tr>
<tr>
<td></td>
<td>• Technological changes are fast-paced</td>
</tr>
</tbody>
</table>

| Disease control - Genetics | • Need for disease control solutions accessible to small-scale players |
|----------------------------| • Genetics advances have been made but have further potential |

<table>
<thead>
<tr>
<th>Greater emphasis on food safety and traceability</th>
<th>Food safety</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Increased consumer sensitivity and role of retailers</td>
</tr>
<tr>
<td></td>
<td>• Special need for distribution infrastructure in lower income markets</td>
</tr>
</tbody>
</table>

| Need for certification | • Traceability across the value chain is critical for market access |
|------------------------| • Proliferation of quality standards requires harmonization |
|                        | • Need for management and certification at the level of the ecosystem |
### The Evolving Industry Structure creates opportunities for further value chain integration

<table>
<thead>
<tr>
<th>Section</th>
<th>Details</th>
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</table>
| **Massive capital requirements**     | - Greater capital investment level  
  - More capital needs for increased operating scale  
  - Additional investment of US$ 50+ billion needed over next 20 years  
| **Availability of capital**           | - Limited for second-tier and small scale operators requiring innovative market-based instruments and risk management solutions. Increasing interest of private equity in mature plays.  |
| **Global players**                   | - Vertical integration along the value chain and cross-sector / cross-protein sector consolidation to achieve economies of scale  
  - Quid of China’s potential as leading investor outside China  |
| **Small-scale actors**               | - Serving domestic markets and creating jobs  
  - How to better integrate them in the global value-chain?  |
| **Consolidation vs. small scale**    |                                                                                                                                 |
| **More knowledge based**             | - R&D and Roll-out of innovations  
  - More seed and early stage investment needed to support R&D activities and the ramp-up of promising pilot projects  
| **Dissemination of operational best practices** | - The industry benefits from numerous platforms for sharing knowledge and best practices.  |
IFC’s Past Experience in Aquaculture and Fisheries

- Early investor in the asset class, dating back to late 70s / early 80s
- Nearly US$100 million invested and 20 transactions disbursed
- Primarily loans, some equity
- Fisheries projects have generally been underperformers, leading to a slowdown in investments in the early 2000s
- Asia, a dominant aquaculture producer, was grossly under-represented in IFC’s investments
Aquaculture vs. Agribusiness: comparing risks and leveraging lessons learned

Common Elements

• Global commodities price volatility
• Disease risk
• Weather risk / Climate change
• Development impact of outreach to small scale operators
• Environment compliance risks

Differences

• Very strong growth of fisheries demand and supply can create even more volatility in prices.
• Enhanced disease risks
• Young R&D history and further potential for genetics break-through
• Rapid technological advances in a young industry
• More sensitive ecosystem issues with marine aquaculture

Opportunity for IFC

• Leverage lessons learned from IFC’s agribusiness investments and value chain models to support the growth of the industry
• Value added by expanding access to long-term finance and helping mitigate sustainability issues
A Two–pronged Approach to fisheries sector investments

Main focus is FOOD SECURITY

Two axis

Strong focus on Aquaculture

- Strong growth fish
  1. Tilapia: Asia, LAC and Africa
  2. Catfish: mainly in Asia
  3. Others: shrimp (Asia, LAC), salmon (in cold climate) etc.
- Expanding low cost producers
- Value chain from feed to plate
- Innovative high impact technologies

Very selective approach to Wild Capture

- High value fish
  1. Tuna: Pacific Islands, Africa
  2. Others on a case by case basis
- Geographies:
  1. Resource-based approach, underexploited marine stocks

Main focuses are SUSTAINABILITY and EMPLOYMENT

IDA countries continue to remain a strong priority for IFC
# Applying the Integrated Value Chain Approach

<table>
<thead>
<tr>
<th>Investment Climate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology, Infrastructure (e.g. cold storage, transport, conservation) and PPPs</td>
</tr>
<tr>
<td>Feed and nutrients</td>
</tr>
<tr>
<td>Financial/Risk Management Products</td>
</tr>
<tr>
<td>Advisory/Technical Assistance</td>
</tr>
<tr>
<td>Environmental and Social Ecosystem Services</td>
</tr>
</tbody>
</table>

**Consumers**

6+ billion

**More focus**

**Value Chain Focused**

- Initial focus on supporting expansion of existing platforms, across the value chain
- Scale-up through programmatic approaches
- Partner with value chain and sustainability integrators such as distributors and retailers
Example of Supply Chain Integrator: Fulfilling the Demands for Sustainability of Leading Consumer Brands and Retailers

Armajaro provides:
- Provides technical assistance & access to finance
- Quality control and link to socially responsible value chain

Producers get:
- Financing and technical support
- Access markets
- Improve livelihoods
- 300,000 more farmers reached (from 600,000)

Processors need:
- Traceability
- Certification
- Quality/quantity
- Reliability
- Socially responsible value chain
IV. IFC Products And Value Added
# Examples of IFC Funding Instruments and Services

<table>
<thead>
<tr>
<th>INSTRUMENTS</th>
<th>PROJECT TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Greenfield project finance</td>
<td>• Expansion of production / processing facilities</td>
</tr>
<tr>
<td>• Debt refinancing</td>
<td>• Port/warehouse infrastructure (logistics)</td>
</tr>
<tr>
<td>• Syndicated loans</td>
<td>• Rehabilitation of assets</td>
</tr>
<tr>
<td>• Trade finance/working capital lines</td>
<td>• Farmer financing programs</td>
</tr>
<tr>
<td>• Partial credit guarantees</td>
<td>• Supply Chain or Distribution integration</td>
</tr>
<tr>
<td>• Acquisition financing</td>
<td>• Quality management / Safety certification</td>
</tr>
<tr>
<td>• Convertible loans</td>
<td>• New market entry / partner</td>
</tr>
</tbody>
</table>
### IFC Value Addition in Agribusiness

<table>
<thead>
<tr>
<th>Long-term Competitive Financing</th>
<th>Regional Knowledge</th>
<th>Global Sector Expertise</th>
<th>Country Risk Mitigation</th>
<th>Environmental &amp; Social Risk Management</th>
<th>Sustainability Toolkit</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Equity</td>
<td>✓ Extensive Local Office Network</td>
<td>✓ 40+ Years of Sector Expertise</td>
<td>✓ Government Relations</td>
<td>✓ Advice on Environmental and Social Best Practices</td>
<td>✓ Supply Chain strengthening: supporting productivity and farmer income</td>
</tr>
<tr>
<td>✓ Fixed/Floating Rates, Local Currencies</td>
<td>✓ Local Transaction Experience</td>
<td>✓ Industry Specialist Advice and Benchmarks</td>
<td>✓ Neutral broker Role</td>
<td>✓ Energy and Water Use Management / Cleaner Technologies</td>
<td>✓ Environmental/Social Standards</td>
</tr>
<tr>
<td>✓ Up to 15 year Loan Maturity</td>
<td>✓ Strong bank partnerships through client networks and B loan participants</td>
<td>✓ Greenfield</td>
<td>✓ Reduced Risk of Expropriation, Breach of Contract, Convertibility</td>
<td>✓ Equator Principles Modeled after IFC Standards</td>
<td>✓ Corporate Governance</td>
</tr>
<tr>
<td>✓ Flexible Amortization Profile</td>
<td>✓ World Bank Synergies</td>
<td>✓ Expansion/Modernization</td>
<td>✓ World Bank Synergies</td>
<td>✓ Withholding Tax Benefit</td>
<td>✓ Community Investment</td>
</tr>
<tr>
<td>✓ Catalyst for other Investors and Lenders</td>
<td>✓ Joint Venture partnership management</td>
<td>✓ Corporate Strategy</td>
<td>✓ Access to International Investors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ Equity Participation</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ Capital Mobilization</td>
<td></td>
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- **Long-term Competitive Financing**
  - Equity
  - Fixed/Floating Rates, Local Currencies
  - Up to 15 year Loan Maturity
  - Flexible Amortization Profile
  - Catalyst for other Investors and Lenders
  - Equity Participation
  - Capital Mobilization

- **Regional Knowledge**
  - Extensive Local Office Network
  - Local Transaction Experience
  - Strong bank partnerships through client networks and B loan participants
  - World Bank Synergies
  - Joint Venture partnership management

- **Global Sector Expertise**
  - 40+ Years of Sector Expertise
  - Industry Specialist Advice and Benchmarks
  - Greenfield
  - Expansion/Modernization
  - Corporate Strategy
  - Access to International Investors

- **Country Risk Mitigation**
  - Government Relations
  - Neutral broker Role
  - Reduced Risk of Expropriation, Breach of Contract, Convertibility
  - World Bank Synergies
  - Access to International Investors

- **Environmental & Social Risk Management**
  - Advice on Environmental and Social Best Practices
  - Energy and Water Use Management / Cleaner Technologies
  - Equator Principles Modeled after IFC Standards
  - Withholding Tax Benefit
  - Local Consultation and Disclosure

- **Sustainability Toolkit**
  - Supply Chain strengthening: supporting productivity and farmer income
  - Environmental/Social Standards
  - Corporate Governance
  - Community Investment
Are there particular roles that IFC is better placed to play to support private investment in Aquaculture in EM?

- Catalyzing Public Private Partnerships?
- Rolling out financing and technical assistance models for small scale farming?
- Special initiatives in Africa?
- Providing thought leadership?
- Which areas of focus within the GPO?

Your feedback is more than welcome!
Leveraging the WBG’s extensive resources and partners

**IFC Investment and Advisory Services**
- IFC Global and Regional Agribusiness Network
- Public Private Partnerships Advisory Services
- Sustainable Business Advisory Services
- IFC Asset Management Company
- Climate Business Group - Early Stage Clean Technology Unit
- Global Agriculture Food Security Program

**World Bank and MIGA**
- PROFISH
- Global Partnership for Oceans
- Fisheries Industry Specialists
- MIGA Products

**Network of Partners**
- IFC Banking and Trade Finance Clients
- IFC Private Equity Clients
- DFIs and Syndication Network
- Partner Industry Organizations
Thank You

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