Managing Risk in Côte d’Ivoire’s Cocoa Sector

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### Summary of Côte d’Ivoire Cocoa Sector

- **Addressing Côte d’Ivoire cocoa sustainability issues is an industry and national imperative**
  - Both industry and country have significant stakes in the health of the cocoa sector in Côte d’Ivoire

- **Cocoa growing conditions in Côte d’Ivoire are bleak but can be improved**
  - Economic, social, environmental conditions are poor and in a downward spiral of decline
  - Conditions are already creating volume and quality risk
  - Turnaround of the cocoa sector in Côte d’Ivoire is both possible and needed along with improvements in other origins

- **Clear strategies exist to take corrective action – Stakeholders must mobilize urgently**
  - Priority should be placed on improving economics to the farmer
  - Solutions to improve farmer income are known but have not been successfully brought to scale
  - Improving farmer income will drive concurrent environmental and social improvements, in combination with other efforts
  - Addressing challenges in the cocoa sector can be integrated with broader agricultural development efforts

- **Achieving success will require a new level of collaboration**
  - Developing/working within a common agenda: government, NGOs, donors, supply chain and then a public-private governance structure for cocoa sector activities in Côte d’Ivoire
  - Integrating commercial interests in sustainability with “public goods” investments
Côte d’Ivoire Cocoa Case Study

I. Situation Assessment

II. Vision and Strategies

III. Taking Action & Partnerships
Côte d’Ivoire is the Leading Cocoa Producing Country in the World, Supplying More than Twice as Much as the Second Largest Country

**Situation Assessment**

Côte d’Ivoire is the Leading Cocoa Producing Country in the World, Supplying More than Twice as Much as the Second Largest Country

- Côte d’Ivoire is 40% of world cocoa supply
- Cocoa is 15% of GDP, 20% of tax revenue and 35% of exports for Côte d’Ivoire
- Cocoa employs 700,000 households and supports six million people

**Annual Cocoa Production by Region, 2007**

- Côte d’Ivoire: 2,257,000 tons
- Cameroon: 602,000 tons
- Nigeria: 582,000 tons
- Ghana: 2,257,000 tons
- Cameroon: 602,000 tons
- Nigeria: 582,000 tons
- Ghana: 2,257,000 tons

**Côte d’Ivoire can become not just a volume leader, but a leader in sustainable, competitive, intensified and diversified cocoa farming systems**

Source: Industry data; 1 – Cocoa from the rest of the world represents less than 10% of total production and is from smaller origin countries (e.g., Papua New Guinea)
Côte d’Ivoire Country-Level Development Challenges

- **Political Uncertainty**
  - Elections have been postponed several times and may not be held in 2009

- **Weak Economic Growth and Outlook**
  - Reduced foreign investment and slow economic growth have resulted from uncertain future
  - Per capita income down 15% since 1999

- **Diminished Public Services and Investment**
  - 72% of cocoa farming villages do not have a health center
  - 9% have no primary school within 3km

### Côte d’Ivoire leads in cocoa production, but not in development against other cocoa producing countries

| UN Human Development Indicator | Côte d'Ivoire Value | Côte d'Ivoire Rank Among All Nations | Côte d'Ivoire Rank Among Selected Cocoa-Producing Countries
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Life Expectancy at Birth</td>
<td>55 years²</td>
<td>164 / 177</td>
<td>5 / 5</td>
</tr>
<tr>
<td>Adult Literacy</td>
<td>48.7%</td>
<td>125 / 139</td>
<td>5 / 5</td>
</tr>
<tr>
<td>Combined School Enrollment</td>
<td>39.6%</td>
<td>160 / 172</td>
<td>5 / 5</td>
</tr>
<tr>
<td>GDP Per Capita</td>
<td>$1648</td>
<td>147 / 174</td>
<td>5 / 5</td>
</tr>
<tr>
<td>UN Human Development Index Total Ranking</td>
<td>166 / 177</td>
<td>5 / 5</td>
<td></td>
</tr>
</tbody>
</table>

1 – Selected cocoa-producing countries include Indonesia, Ghana, Cameroon, and Nigeria
2 – Data on life expectancy is from CIA Factbook; rankings are from UNDP Human Development Report

Cocoa Sustainability in Côte d’Ivoire–A Vision for Change
The Vast Majority of Cocoa Farmers in Côte d’Ivoire Are at Subsistence Level, With Limited Ability to Invest Sufficiently in Their Farms

Côte d'Ivoire Average Farm and Family-Level Economics

<table>
<thead>
<tr>
<th>Key Farm Indicators</th>
<th>Cocoa Farming – Inefficient, under priced, subsistence…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Avg. Yield</td>
<td>• 450 Kg/Ha</td>
</tr>
<tr>
<td></td>
<td>• Average farm size 3 Ha</td>
</tr>
<tr>
<td>Cocoa Volume</td>
<td>• 1.35 tons</td>
</tr>
<tr>
<td>Cocoa Price</td>
<td>• Recent farm gate price of $1-1.40 / Kg</td>
</tr>
<tr>
<td>Income</td>
<td>• ~$1600 (Gross Income)</td>
</tr>
<tr>
<td></td>
<td>• Gross income too low to invest in optimal farm inputs</td>
</tr>
<tr>
<td></td>
<td>– Cost of optimal farm inputs ($300 / Ha or $900 total</td>
</tr>
<tr>
<td></td>
<td>on a 3 Ha farm)</td>
</tr>
<tr>
<td>Average Farmer Age¹</td>
<td>• 49 years old</td>
</tr>
<tr>
<td># of Kg of Cocoa</td>
<td>• Côte d'Ivoire: 52 kg of cocoa</td>
</tr>
<tr>
<td>Needed to Buy One</td>
<td>• Indonesia: 8 kg of cocoa</td>
</tr>
<tr>
<td>Bag of Fertilizer</td>
<td></td>
</tr>
</tbody>
</table>

1 – In country expert interviews; François Ruf, CIRAD
Cocoa Sustainability in Côte d’Ivoire—A Vision for Change
Situation Assessment

Challenging Economic, Environmental, Social and Political Conditions in Côte d’Ivoire Place Considerable Pressure on the Cocoa Supply Chain

Economic

- **Low Cocoa Yields** – 450 Kg/Ha
- **Tax Burden** – 34% versus ~15% in Ghana and zero to very small in other cocoa origins
- **Resulting Low Share of Prices to Farmers**

Environmental

- **Deforestation** – no new land
- **Full Sun Cocoa Systems**\(^1\) – 35% no shade
- **Declining Soil Fertility** – ~14% access to fertilizers

Social

- **Lack of Social Services** – Only ~28% of cocoa farming villages have a health center
- **Child Labor** – 89% of children, 43% injuries, 9% forced labor
- **Migration**

Political and Regulatory

- **Evolving Political Environment**
- **Launch of New Cocoa Sector Governing Body**
- **Land Tenure Rights**

Notes: 1- This does not include farms that have 18 shade trees, the acceptable shade level for several certification programs.
Source: Industry Documents, United Nations, World Bank
Cocoa Sustainability in Côte d’Ivoire – A Vision for Change
Cocoa Sector Sustainability Conditions Are Currently in a Mutually Reinforcing Downward Spiral

In the absence of corrective action, these negative trends will accelerate and threaten overall cocoa production levels and quality.
Quality Declines Are Tangible, Production Declines Are Likely

Côte d’Ivoire Cocoa Bean Quality

- Declining bean quality has significant commercial implications for Industry
  - Raises costs of bean processing (and processed good prices)
  - Increases quantity of rejected beans
  - Creates food safety concerns

- Quality issues are a recent phenomena and once addressed, the situation can be reversed

Côte d’Ivoire Cocoa Bean Quality

<table>
<thead>
<tr>
<th>Year</th>
<th>Moulds</th>
<th>FFAs</th>
<th>Slaty Beans</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>4%</td>
<td>2%</td>
<td>12%</td>
</tr>
<tr>
<td>2005-06</td>
<td>6%</td>
<td>4%</td>
<td>8%</td>
</tr>
<tr>
<td>2006-07</td>
<td>8%</td>
<td>6%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Total Cocoa Production in Côte d’Ivoire 2005 - 2020 (Metric Tons)

- Drivers of decreased production include:
  - Aging trees
  - Soil fertility loss
  - Increased losses (pests/diseases)

- Deteriorating conditions increase Côte d’Ivoire’s vulnerability to devastating declines

Potential Scenarios

- Scenario 1: Production is flat, as in the last 5 years
- Scenario 2: Production flat until 2012, then begins to decline gradually (5%/yr)
- Scenario 3: Production declines rapidly due to an uncontrollable disease outbreak (modeled on Brazil)

Source: Industry data

Cocoa Sustainability in Côte d’Ivoire – A Vision for Change
Côte d’Ivoire Cocoa Case Study

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A New Comprehensive Vision of Cocoa Sustainability, Shared by All Stakeholders, Is Urgently Needed in Côte d’Ivoire

Vision

A Revitalized Cocoa Sector in Côte d’Ivoire

Building a reliable supply of cocoa and improving farmer livelihoods

Economic

Priority Goal: Improve Farmer Income

• Increase farm productivity
• Promote tax/sector reform
• Improve quality
• Promote certification
• Improve access to market information
• Promote crop diversification

Strategies

Environmental

Improve Environmental Management of Cocoa Growing Areas

• Develop and promote environmentally friendly intensification methods
• Monitor environmental impacts of intensification and diversification
• Validate optimal agroforestry systems
• Reclaim fallow cocoa growing areas
• Conserve remaining forests

Social

Invigorate Rural Communities

• Expand availability of rural services
• Ensure responsible child labor practices
• Improve rural infrastructure
• Research rural migration issues

Action should prioritize economic issues as they unlock the ability to make concurrent improvements in environmental and social dimensions
Vision and Strategies

Opportunities Exist To Increase the Farmer’s Share of FOB Cocoa Prices
by Approximately 40% Through Tax Reform and Quality Initiatives

Potential Impact of Price-Based Gains
(Gains in USD)

![Diagram showing the potential impact of price-based gains]

**Price-Based Gains**

- **Cocoa farmers can realize up to 40% more value for their cocoa through:**
  - **Quality Premium** – Achieve up to USD $200 (premium received in Ghana), allocated proportionally to farmers and supply chain partners for quality and traceability
  - **Tax Reform** – Reduction of total taxes from 35% to 17.5% with benefits accruing proportionally across the supply chain

- **Market Information System** – Cocoa farmers can also increase farm gate price through improved market pricing information (not yet estimated)

**Note:** FOB is “freight on board” (export price)

1 – Total taxes include both export tax and parapublic tax

Source: 2006 industry data adapted to September 2008 prices, In-country research, expert interviews

Cocoa Sustainability in Côte d’Ivoire–A Vision for Change

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Vision and Strategies

Volume-Based Gains in Combination with Priced-Based Gains Can Generate Significant Net Income Improvements

- **Price-based gains**¹ produce a modest but direct increase in farmers’ bottom line (i.e., require no investment)
- **Volume-based gains**² in combination with price-based gains generate significantly more income, but require up-front investment by farmers in farm inputs

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**Price-Based Gains**¹  
(Potential Family Net Income Impact)

**Volume- and Price-Based Gains**²  
(Potential Family Net Income Impact)

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1, 2: Income impact is shown as net of input/plant material costs for graph on right (2). Both graphs assume 12% increase in farmer income due to quality premium in year 2; additional 25% increase in income due to tax reform in year 3. Graph on right (2) assumes 30% productivity increase in year 2 from pest management techniques; additional 50% increase in year 3 from improved pest management and plant material; additional 33% increase in year 4 from improved pest management and plant material; additional 30% in year 5 from use of fertilizer; and additional 10% each year thereafter until optimal yield of 1500 kg/ha is achieved. Source: Expert interviews and FSG analysis
Four Leverage Points Will Be Critical to Realizing the Goals of the Sustainability Vision

1. Development of a Common Agenda that defines the problem and sets forth a vision for change, strategies for achieving the vision, and resource requirements is essential for sector-level impact.

2. Policy Reform will help underpin the effort to achieve sector-level improvements in economic, environmental, and social conditions.

3. Further Research & Development is necessary in several key impact areas (e.g., optimal plant material, agroforestry systems).

4. “Last Mile” Extension refers to the development of efficient new mechanisms to efficiently distribute farm inputs and transfer knowledge at scale.
The Completion of Several Activities Within Each Leverage Point Will Lead to the Revitalization of the Cocoa Sector in Côte d’Ivoire

**Leverage Points**

<table>
<thead>
<tr>
<th>Leverage Point</th>
<th>Common Agenda</th>
<th>Policy</th>
<th>Research &amp; Development</th>
<th>“Last Mile” Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Strategies</td>
<td>• Set forth a vision for change</td>
<td>• Increase farmer share of FOB prices</td>
<td>• Develop improved plant material/genome mapping</td>
<td>• Distribute inputs and educate farmers in crop husbandry and post-harvest techniques – at scale</td>
</tr>
<tr>
<td>Environmental Strategies</td>
<td>• Garner early buy-in from government, industry, and donors</td>
<td>• Increase government funding for the cocoa sector</td>
<td>• Determine economic impact of certification &amp; diversification</td>
<td></td>
</tr>
<tr>
<td>Social Strategies</td>
<td>• Gain consensus on alignment of agricultural and environmental goals</td>
<td>• Encourage enforcement of forest protection policies</td>
<td>• Determine optimal agroforestry system</td>
<td>• Improve farmer knowledge on environmentally-friendly production</td>
</tr>
<tr>
<td></td>
<td>• Gain consensus on priority social issues</td>
<td>• Advocate for increased funding for social services &amp; rural development</td>
<td>• Demonstrate models of social service provision</td>
<td>• Increase farmer knowledge of appropriate labor practices</td>
</tr>
</tbody>
</table>

**Key Measures of Success**

- Farmer quality, yields and income
- Hectares under improved environmental management
- Improved social conditions in cocoa growing areas

**Intermediary Milestones**

- Collective agenda; funding
- Government engagement
- New knowledge & tools; improved plant material
- New extension capacity
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Taking Action

Today, a Multitude of Disconnected Investments Fail to Transform the Cocoa Sector From Extensive to Intensive and Diversified Farming

- Economic Initiatives
  - Farmer Productivity
  - Quality
  - Taxation
  - Market Information

- Environmental Investments
  - Deforestation
  - Farming Practices
  - Climate Change

- Social Investments
  - Responsible Labor Practices
  - Improving Living Conditions

Sample of Actors Currently Working in Côte d’Ivoire’s Cocoa Sector

Current efforts are insufficient; Revitalizing the cocoa sector will require deeper integration of respective efforts and competencies

Note: Organization web sites, FSG research
Cocoa Sustainability in Côte d’Ivoire–A Vision for Change
Taking Action

Building a Common Agenda Should Focus on Defining Location-Specific Integration of Dedicated Efforts with Sector-Level Support

Scope of Action on “Certified” Supply Chains
Farm-Level Work

- Farmer field schools
- Capacity-building of partner coops and traitants
- Certification and traceability of produced / purchased cocoa
- Input provision linked to training and certification
  – Germplasm, fertilizer, credit as examples
- Improved community support services

Exporters and Manufacturers

Building Support / Demonstrating Success at Sector Level

- Agreement on intervention targets among key partners
  – Geographic area of focus; Roles, responsibilities, reporting, governance; Agreement on key partners; Formation of Steering Committee (multi-stakeholder)

- Scale-up certification schemes and determine best organizational approach (farmer coops or trading groups) and strengthen selected farmer organizations (condition: verified standards)

- Transformation and scale-up of “Last Mile” extension models

- R&D investments to improve extension provision

- Community research, empowerment & enhancements

- Supportive policy reform & Infrastructural enhancements
Taking Action

There Are Many Reasons To Believe a Cocoa Sector Transformation Is Possible

**Conditions supporting Côte d’Ivoire Cocoa Sector Transformation**

- Willing and interested beneficiaries

- Common understanding of both sector challenges and solutions

- Commitment and motivation among stakeholders

- Sector-level approach takes into account commercial self-interest

- Realistic acknowledgement of government and sector policy conditions

- Other agricultural sector transformation examples exist to draw from