



**International  
Finance Corporation**  
World Bank Group

# Solid Waste

IFC's Approach

15th Annual LMOP Conference and Project Expo

Jim Michelsen, Carbon Business Group, IFC

Baltimore, MD - January 18, 2012

# IFC - Who We Are, What We Do



# IFC is a Member of the World Bank Group

**IBRD**  
International Bank  
for Reconstruction  
and Development

Est. 1945

**Role:** To promote institutional, legal and regulatory reform

**Clients:** Governments of member countries with per capita income between \$1,025 and \$6,055.

**Products:**

- Technical assistance
- Loans
- Policy Advice

**IDA**  
International  
Development  
Association

Est. 1960

To promote institutional, legal and regulatory reform

Governments of poorest countries with per capita income of less than \$1,025

- Technical assistance
- Interest Free Loans
- Policy Advice

**IFC**  
International  
Finance Corporation

Est. 1956

To promote private sector development

Private companies in member countries

- Equity/Quasi-Equity
- Long-term Loans
- Risk Management
- Advisory Services

**MIGA**  
Multilateral  
Investment and  
Guarantee Agency

Est. 1988

To reduce political investment risk

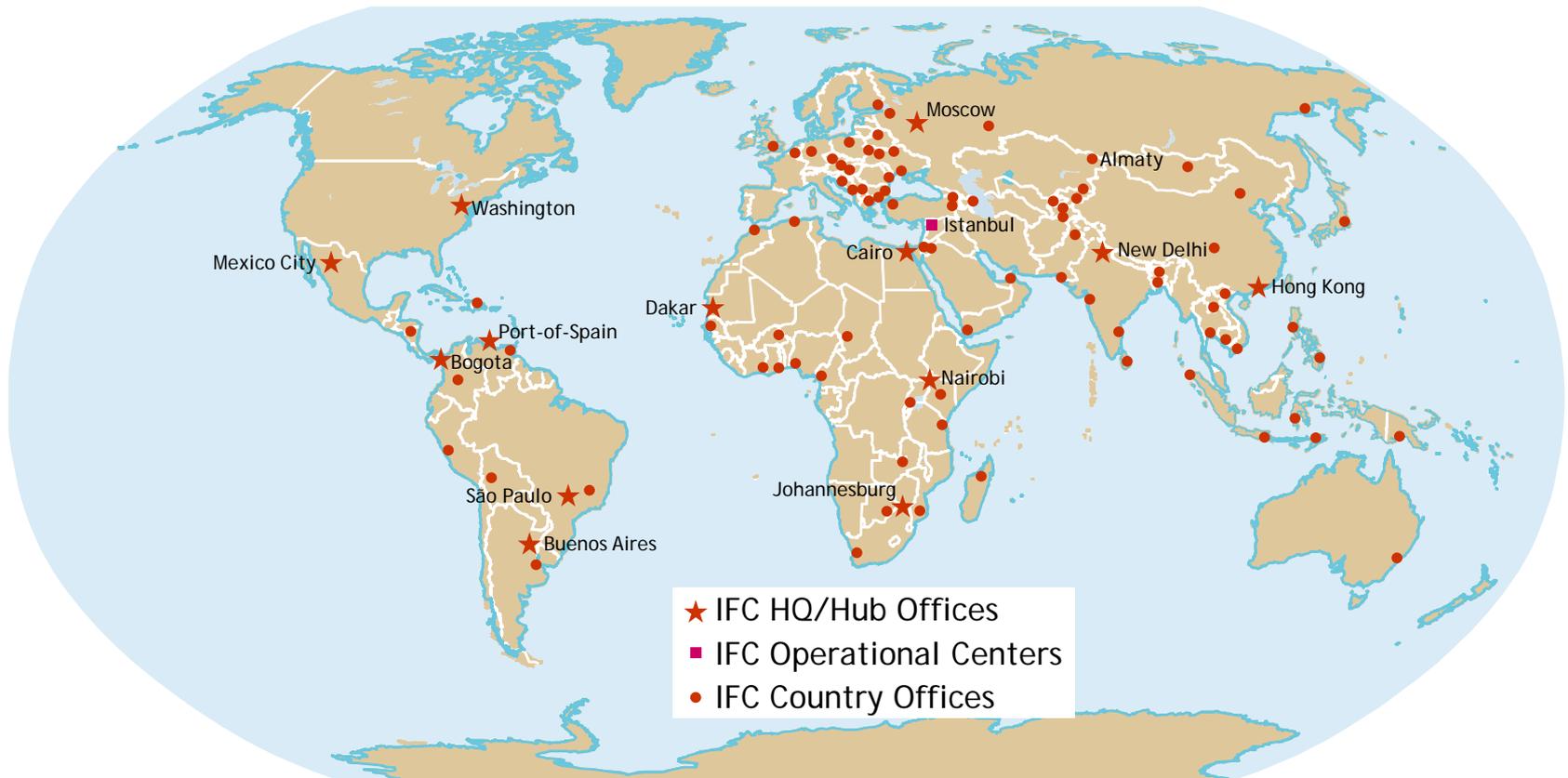
Foreign investors in member countries

- Political Risk Insurance

← Shared Mission: To Promote Economic Development and Reduce Poverty →

# IFC's Global Reach

100+ country and regional advisory services offices worldwide



# What IFC Offers

## IFC Investment Services

- Loans/ Equity
- Syndications
- Trade finance/ Securitized finance
- Client risk management services
- Treasury services
- Liquidity management

## IFC Advisory Services

- Access to finance
- Sustainable Business
- Investment Climate
- Public-Private Partnerships

## IFC Asset Management Company

- Wholly owned subsidiary of IFC that invests third-party capital alongside IFC, with approximately US\$4 billion under management as of June 30, 2010

# Financial Products - From Equity to Debt



- Corporate and JV
- Typically 5-15% shareholding (not to exceed 20% of total equity)
- Long-term investor, typically 6-8 year holding period
- Not just financial investor, adding to shareholder value
- Usually no seat on board
- Infraventures (early equity investments)

- Subordinated loans
- Income participating loans
- Convertibles
- Other hybrid instruments

- Senior Debt (corporate finance, project finance)
- Fixed/floating rates, US\$, Euro and local currencies available
- Commercial rates, repayment tailored to project/company needs
- Long maturities: 8-20 years, appropriate grace periods
- Range of security packages suited to project/country
- Mobilization of funds from other lenders and investors, through cofinancings, syndications, underwritings and guarantees

# How We Finance Projects

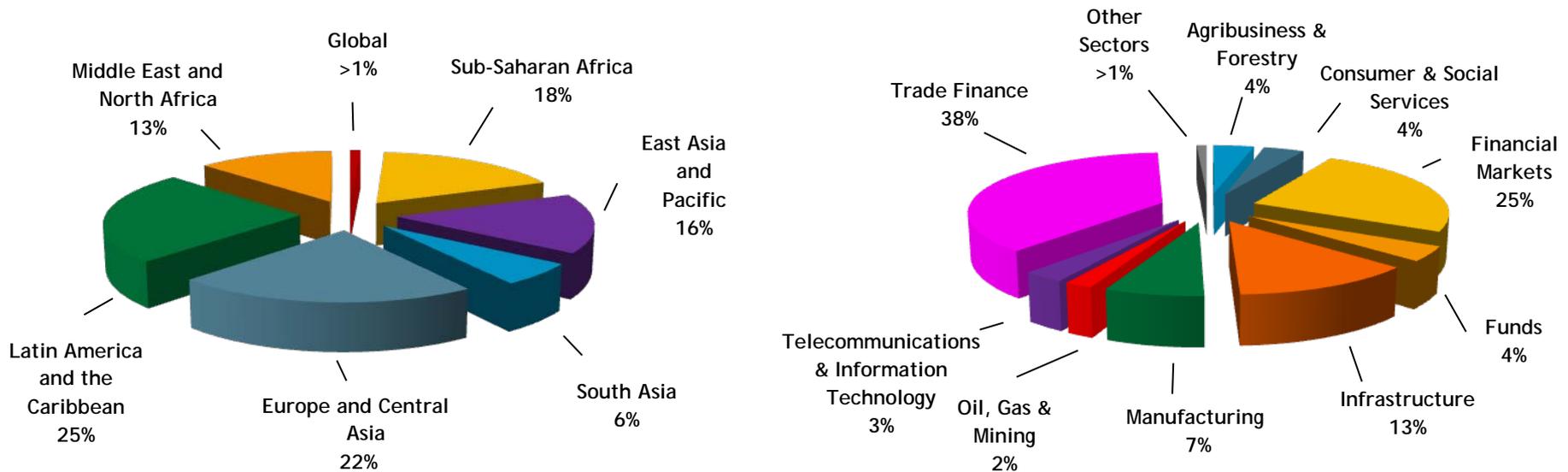
Project Type		IFC Investment
<ul style="list-style-type: none"><li>• Greenfield, total cost less than \$50 million</li></ul>		<ul style="list-style-type: none"><li>• Up to 35% of project cost for IFC's account</li></ul>
<ul style="list-style-type: none"><li>• Greenfield, total cost more than \$50 million</li></ul>		<ul style="list-style-type: none"><li>• Up to 25% of project cost for IFC's account</li></ul>
<ul style="list-style-type: none"><li>• Expansion or rehabilitation</li></ul>		<ul style="list-style-type: none"><li>• Up to 50% of project cost</li></ul>

- Umbrella for participants in IFC's syndication program: IFC lender of record, immunity from taxation and provisioning requirements.
- IFC's total financing (for its own account) must be less than 25% of total company capitalization, and IFC does not manage or have largest stake.

# Fiscal Year 2011 Highlights

- **Investments:** \$18.7 billion in total financing: \$12.2 billion for IFC's own account \$6.5 billion mobilized , in 518 new projects in 102 countries;
- **Portfolio:** \$55.2 billion portfolio, representing investments in 1,737 firms

## Investments by Industry and Region, FY11 Commitments for IFC's Account: \$12.2 Billion



# IFC and Solid Waste

## Advisory Services



# Public Private Partnership

- IFC provides **transaction** advice to national and municipal governments in emerging markets to implement **sustainable PPPs** that improve living standards and **promote long-term economic** growth.



- Our work **balances** the requirements of investors with **public-policy** considerations and the **needs of the community**.
- Since **1989**, IFC has worked on more than **285 private-sector participation** transactions worldwide and is the **only** multilateral institution to offer such advisory services to governments directly.
  - Designing and implementing PPP
  - Arranging management concessions
  - "Support for extending access"

# Public-Private Partnerships - Shared Responsibility

- Structuring sustainable agreements

- “Balanced deals”
- Transparency
- Attention to downside
- Financially, economically, politically sustainable structures

- Financing

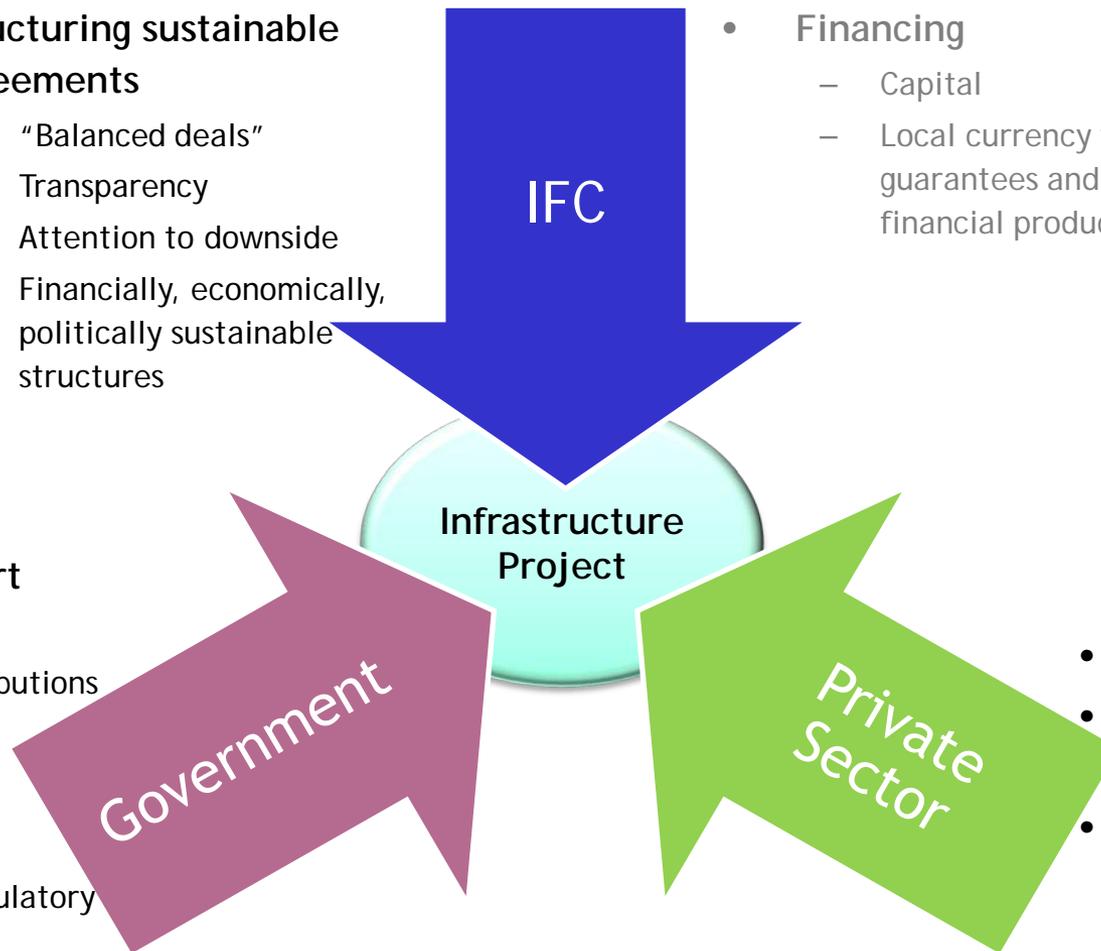
- Capital
- Local currency facilities; guarantees and structured financial products

- Financial Support

- Assets
- In-kind contributions
- Funding
- Subsidy

- Political support

- Legal and regulatory frameworks



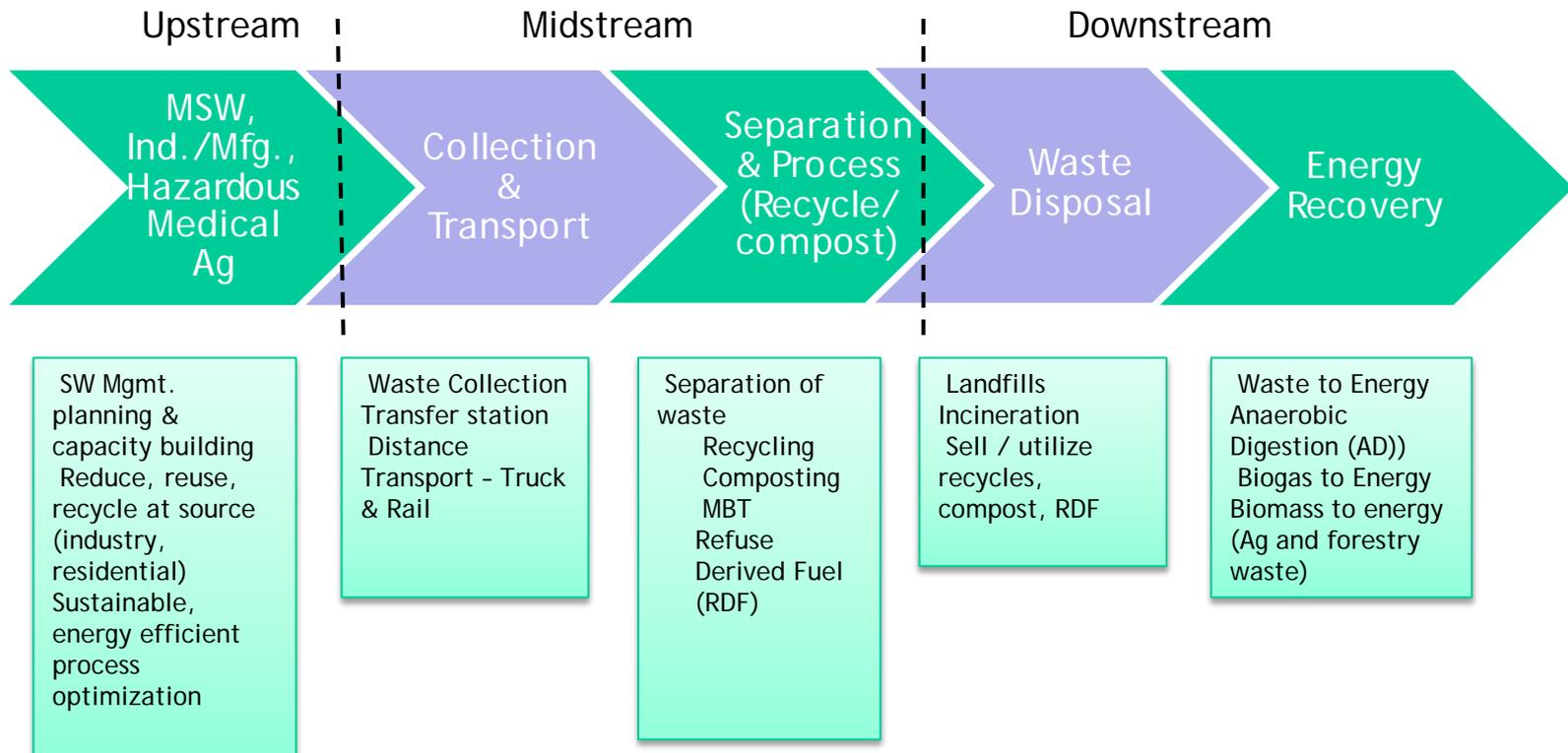
- Financing
- Management Expertise
- Technical Expertise

# IFC and Solid Waste Infrastructure



# Working Across the Waste Value Chain

- IFC finances projects **across the waste value chain** from upstream industry/populations to downstream disposal and energy utilization



# Investment Approach

- Promote **development of waste industry in emerging markets**, help reduce costs, and allow the industry to become competitive
- IFC investments support integrated SW management approach
  - Regional approaches to gain economies of scale and drive down costs
- Leverage existing formal and informal sectors for collection and recycling, to maximize poverty & social impacts, improve health & safety, and drive gender equality
- Encourage low cost, technically viable, and climate favorable waste collection and disposal solutions with energy recovery where feasible
- Support upstream industry / populations to adopt “3Rs” - Reuse, Reduce Recycle
- Access concessional finance to enable waste projects in LICs where full cost recovery is not yet possible due to ability to pay or insufficient regulatory framework

# IFC Solid Waste Management Projects

Project	Description	IFC Investment	Year
<b>Infrastructure Investment</b>			
<b>Modern Asia</b> (Thailand/Indonesia)	Waste collection/transport/ recycle/treat/dispose	US\$15 mm (corporate finance)	2004
<b>Ramky</b> (India)	MSW, hazardous industrial, bio- medical waste treatment	US\$15 mm (corporate finance)	2005
<b>Petstar</b> (Mexico)	Plastic recycling	US\$24.5mm (project finance)	2007
<b>Estre Ambiental</b> (Brazil)	Sanitary landfills/waste treatment	Approx. US\$24.5mm (corporate finance)	2009
<b>Advisory/Financial Markets</b>			
<b>Vietnam Battery Recycling</b>	Recycle car batteries - Establish Regs and run recycle pilot program	Advisory Services	2010
<b>PPP - SW Maldives</b>	Waste collection/transport/ recycle/treat/dispose	Conduct PPP Process 20 yr BOT	2011

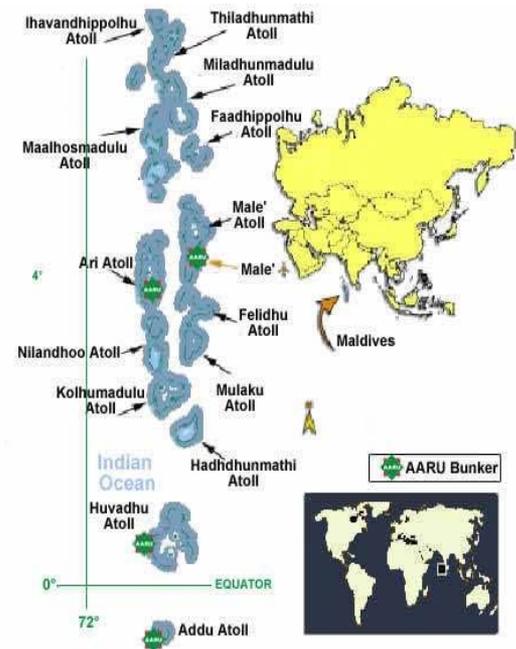
*In 2010, IFC invested US\$1.6 billion in climate change business, which is a 60 percent increase from the previous year. By 2013, IFC aims to increase its climate change business to at least 20% of its total annual commitments*

# IFC SW Investment Experience

## Case Studies

# Maldives SW PPP- Project Overview

- **Project**
  - Integrated Waste Management project for 4 islands in the capital region generating nearly 400 tons of waste per day
- **Context & Background**
  - Collection done by informal sector - not bad but inconsistent; user charges
  - Municipality does transportation and disposal - severe environmental issues
  - 17 years of environmental abuse at Thilafushi island
  - Operations funded by Government budget
- **Government Objectives**
  - Manage waste in an environmentally friendly and sustainable manner
  - Improve waste management collection services
  - Introduce efficient waste treatment & disposal systems that limit damage to the surrounding marine environment



# Maldives SW PPP Case Study

- **Bid Results:**
  - Bid was awarded to Tatva Global Renewable Energy (Maldives) Ltd - a consortium of UPL Environmental Engineering Limited (India) and MDSE (Germany) - May 2011
- **PPP Structure:**
  - Tripartite agreement among Tatva, Municipality and Govt Guarantor: Ministry of Finance
  - 20 Yr BOT
  - Tipping Fee (USD / ton) for treatment & disposal and Transportation Fee (USD / ton-km) for collection & transport
  - Government has guaranteed waste volume of 200TPD
  - Tariff collection risk borne by the Govt.
  - Invoicing by Tatva in USD; Govt. payment in local currency at Monetary Authority rates at time of invoicing
- **Key Terms:**
  - Collect and transport waste from Malé and 4 islands; MBT facility (sorting, composting) construction of LF, 2.7 MW WTE gasification facility. Scheduled COD in Feb 2013.
  - USD 50 million investment
- **Tatva Approach**

# Estre Ambiental, Brazil - Case Study

- Leading privately-owned solid waste management (SWM) company in Brazil
- Started in 1999 with 1 landfill
- Business portfolio included:
  - Six sanitary landfills - 5 in Sao Paulo, Brazil and 1 in Buenos Aires, Argentina
  - Others
- 5.6 million tons disposed in Estre landfills in 2008
  - 15,400 tons per day
- Existing landfills with 70.2 million tons of capacity (only ~ 30% utilized)



Estre Ambiental, Itapevi LF, - Sao Paulo



Estre Ambiental, Paulinia LF, - Sao Paulo

# Estre Landfills - Key Business Considerations

- Regulatory Environment
  - Gov't policies/regulation to enforce disposal in sanitary landfills
- Solid waste supply
  - Min Volume/ Price / Term/ Exclusivity
  - Client concentration
- Municipality financial strength
  - Household trash collection bill/ budget line item?
  - State/federal subsidies/guarantee
- Competition
  - Access to land and community approval
- Technical considerations
  - Landfill size/capacity, design, stability, road access
  - Type/quality of waste
  - Sponsor 's technical competence and track record
- Corporate governance
  - Family-owned business
- Security



Estre Ambiental, Paulinia LF, - Sao Paulo

# Estre Ambiental Case Study

- **Project Description:**
  - Leading privately-owned solid waste management (SWM) company in Brazil. 5.6 million tons disposed in Estre landfills in 2008 (15,400 tons per day).
  - Existing landfills with 70.2 million tons of capacity (only ~ 30% utilized)
- **IFC Investment:**
  - IFC Investment (FY09 commitment)
    - A Loan of BRL 40 million
    - C Loan of US\$ 4.5 million
    - Approx. US\$24.5 million
- **Estre Plan**
  - Aggressively expand waste operations in Brazil
  - 
  - Improve SW collection and disposal practices in Brazil, reduce GHG emissions, reduce unfavorable environmental and H&S impacts resulting from improper disposal of waste
- **Developmental Impacts**

# Wrapping up....

- What the IFC does:
  - We are the main financial player for the private sector in emerging markets. Sustainability and Climate Change are core priorities.
  - Provide a range of financial products and expertise across sectors in emerging markets to support the private sector, and enable liquidity and risk sharing.
  - Assisting in the reduction of transaction costs through Advisory Services.
- What we are looking for in the SW sector:
  - Direct Investment in projects, typically single investment in a company or project >US\$15 million; less depending on technology and emerging market
  - Smaller projects- Financial markets through a network of over 700 financial institutions supporting portfolios of smaller projects (replicable, scaleable)
  - Govts looking to involve the private sector to address waste issues/opportunities
- What we can't do:
  - Finance projects or technologies that are
    - Not commercially proven. Can assume some scale-up risk
    - Promoted by project sponsors with limited experience and/or capital

## Further Information

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