Solid Waste
IFC’s Approach

15th Annual LMOP Conference and Project Expo

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IFC - Who We Are, What We Do

Deep Industry Experience
IFC is a Member of the World Bank Group

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

**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

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

**Est.:**
- IBRD: 1945
- IDA: 1960
- IFC: 1956
- MIGA: 1988

**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

**Senior Debt & Equivalents**
- 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)

**Mezzanine / Quasi Equity**
- Subordinated loans
- Income participating loans
- Convertibles
- Other hybrid instruments

**Equity**
- 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

<table>
<thead>
<tr>
<th>Project Type</th>
<th>IFC Investment</th>
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<tbody>
<tr>
<td>Greenfield, total cost less than $50 million</td>
<td>Up to 35% of project cost for IFC’s account</td>
</tr>
<tr>
<td>Greenfield, total cost more than $50 million</td>
<td>Up to 25% of project cost for IFC’s account</td>
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<tr>
<td>Expansion or rehabilitation</td>
<td>Up to 50% of project cost</td>
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</table>

- 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

- Government
- Infrastructure Project
- Private Sector

IFC
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.

**Upstream**
- MSW, Ind./Mfg., Hazardous Medical Ag

**Midstream**
- Collection & Transport
- Separation & Process (Recycle/compost)

**Downstream**
- Waste Disposal
- Energy Recovery

- SW Mgmt. planning & capacity building
  - Reduce, reuse, recycle at source (industry, residential)
  - Sustainable, energy efficient process optimization

- Waste Collection Transfer station
  - Distance Transport - Truck & Rail
- Separation of waste
  - Recycling
  - Composting
  - MBT
  - Refuse
  - Derived Fuel (RDF)
- Landfills
  - Incineration
  - Sell / utilize recyclables, compost, RDF
- Waste to Energy
  - Anaerobic Digestion (AD)
  - Biogas to Energy Biomass to energy
  - (Ag and forestry waste)
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
<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
<th>IFC Investment</th>
<th>Year</th>
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<tbody>
<tr>
<td><strong>Infrastructure Investment</strong></td>
<td></td>
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<tr>
<td>Modern Asia (Thailand/Indonesia)</td>
<td>Waste collection/transport/recycle/treat/dispose</td>
<td>US$15 mm (corporate finance)</td>
<td>2004</td>
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<tr>
<td>Ramky (India)</td>
<td>MSW, hazardous industrial, biomedical waste treatment</td>
<td>US$15 mm (corporate finance)</td>
<td>2005</td>
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<tr>
<td>Petstar (Mexico)</td>
<td>Plastic recycling</td>
<td>US$24.5mm (project finance)</td>
<td>2007</td>
</tr>
<tr>
<td>Estre Ambiental (Brazil)</td>
<td>Sanitary landfills/waste treatment</td>
<td>Approx. US$24.5mm (corporate finance)</td>
<td>2009</td>
</tr>
<tr>
<td><strong>Advisory/Financial Markets</strong></td>
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<tr>
<td>Vietnam Battery Recycling</td>
<td>Recycle car batteries - Establish Regs and run recycle pilot program</td>
<td>Advisory Services</td>
<td>2010</td>
</tr>
<tr>
<td>PPP - SW Maldives</td>
<td>Waste collection/transport/recycle/treat/dispose</td>
<td>Conduct PPP Process 20 yr BOT</td>
<td>2011</td>
</tr>
</tbody>
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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

- **Key Terms:**
  
  • 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

- **Tatva Approach**
  
  • 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
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 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 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

- **Developmental Impacts**
  - Improve SW collection and disposal practices in Brazil, reduce GHG emissions, reduce unfavorable environmental and H&S impacts resulting from improper disposal of waste
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 it 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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