Strategy Session on Financing Green Growth

Copenhagen
October 11th, 2011

Luciano Coutinho
President

BNDES Brazilian development bank
Sustainable Production. This helps establish strategies and efforts, such as:

✓ **Ecodesign**, seeking to improve products and processes for cleaner production;
✓ Modular construction to reduce waste in civil construction;
✓ Defining sustainability criteria for buildings;
✓ Supporting development of recycling chains (in keeping with the [National Policy on Solid Waste](#));
✓ Regional sustainable development beginning with competences and resources that are available locally; and
✓ Stimulating development and adopting renewable sources of energy in industry (in keeping with the [National Policy on Climate Change](#) and the [National Energy Policy](#)).

Source: MDIC
BNDES: Creation of the Program for the Climate Fund (MMA)
- Resources to finance projects that reduce greenhouse gas emissions

BNDES: Financing to reduce emissions (Innovation)
- Support for technological development and commercialization of capital goods that hold an energy efficient seal, as well as for equipment focused on reducing greenhouse gas emissions.

2014 GOALS
To produce in a cleaner fashion: to reduce energy consumption per GDP industrial unit (energy consumption in tonnes equivalent to oil – tep per GDP industrial unit)

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2019</th>
</tr>
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<tbody>
<tr>
<td>264.4 tep/US$ million</td>
<td></td>
<td>240.4 tep/US$ million</td>
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</table>

Source: MDIC
National Energy Policy 2030

Priority for cleaner energy

Evolution of Internal Energy Supply Structure – Energy Sources (%)

Considering average GDP growth of 4.1% p.a. Source: Ministry of the Environment
Environmental Policies

National policy on Climate Change - Goals

- Development of the low-carbon economy;
- Renewable Energy;
- Biofuels;
- To reduce deforestation;
- To increase the forest coverage;
- To reduce the vulnerability of the population that face climate change;
- To strengthen the development of scientific research aimed at adapting to impacts from climate change.

Source: Ministry of the Environment
Environmental Policy

National Policy on Solid Waste

Undergoing public consultation.

3 “Rs”:
Reduce, Re-use and Recycle

SOME GOALS

✓ Eliminate open-air dumps by 2014;
✓ Include and strengthen the 600,000-strong waste pickers’ organization by 2023*;
✓ Statewide plans elaborated by 2012, inter-municipal and municipal by 2014;
✓ Fine-tune treatment of waste generated in ports and airports by 2014;
✓ Final destination of industrial waste should be environmentally appropriate by 2019;
✓ Recuperating gas from sanitary landfill – 300 MW/h by 2031*.

Source: Ministry of the Environment. *considering the most favorable scenarios
“Modern technology has progressed in such a way that human activity can now affect the future of our planet.”

“So far, human interference did not compromise our capacity to regenerate. But this situation has changed considerably and, for this reason, nature has become an object of human responsibility.”

“The preservation of nature has thus become an ethical and political issue.”

Hans Jonas in “The Imperative of Responsibility: In Search of Ethics for the Technological Age”
“The new age has incorporated non-traditional interested parties ...
These players act by means of local and global networks, sometimes separated by physical and cultural oceans, capable of generating pressures that may strategically affect companies, as well as influence legal and social licenses to operate their access to capital, market positioning, image and reputation - all together, their market value”.

Carlos Alberto Roxo (Source: Estado de São Paulo Newspaper, May 2, 2009)
It is necessary to “equip society with the means to incorporating the values of nature into decision-making at all levels”.

In this sense, it is important to merge financial valuation with sustainability. This implies recognizing and considering the intangible values of the environment and biodiversity.

Financial institutions must foster and accelerate the development of a new economy that recognizes these values (valuation standards, best practices, new indicators, incentives, benchmarks etc.)
Mindset Change

NEW MENTAL MODEL

Strategic focus on:
SOCIAL, ECONOMIC ENVIRONMENT, INNOVATION TERRITORIAL INTEGRATION
(quintuple bottom line)

Social Area
20 YEARS

Transversal Committees
• Studies on specific subjects and sectors
  • Carbon Market, Hydro Resources, Energy Efficiency, Forests, Charcoal etc.

• Mapping out best socio-environmental practices
  • 26 guides covering the entire economy

• Eco-efficiency baselines + social responsibility commitments ➔ Best Practices

• Differentiated credit according to socio-environmental conformity + stimulus to socio-environmental self-regulation

• Green Accounting ➔ paradigm shift
Financing Green Growth

**DIRECT OPERATIONS:**
Sectors **directly** related to the environment or traditional sectors with technological innovations optimizing the use of natural resources:

- Forest assets
- Chemical industry
- Renewable energies
- Biotechnology
- Sanitation and waste

**PRIVATE EQUITY FUNDS:**

- CDM Fund
- Sanitation and Environment Fund
- Forestry Fund
- Amazon Productive Activities Fund
- Green Tech Funds*

**Investments (US$ million):**

- Amazon: 59
- Sanitation Environment: 234
- Forestry: 354
- CDM: 240
- Green Tech: 166

BNDES: 405  Total: 1.053

* 2 Funds being structured
Financing Green Growth

**FIXED INCOME**
- Broad-spectrum of Environmental Lines.

**GREEN SECURITIES AND PRODUCTS**
- Agricultural “green” note.
- Suppliers ABS Structured Fund.
- Exchange-traded Fund (ETF).
- Carbon-efficient index.
The Carbon Efficient Index

An index calculated on companies’ greenhouse gas emissions (GEE)

Objectives:

- To encourage the adoption of policies to reduce emissions in companies
- To bring transparency to the market regarding company emissions
- To anticipate the competitive environment in a low-carbon economy
- To create investment opportunities for investors sensitive to environmental issues

Recalculation based on GEE emissions

- Based on Brazilian IBrX-50 stock index
- Weight reduction in the index of stocks with the highest [tCO2e emission/R$MM of revenue] for each sector
- Companies’ participation is voluntary

Previous Situation of IBrX-50 Companies

Companies that report data on emissions

June, 2009

Source: Websites, annual reports and sustainability reports.

Example

<table>
<thead>
<tr>
<th>Participation</th>
<th>&quot;Original&quot; Index</th>
<th>&quot;Carbon Efficient&quot; Index</th>
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<tbody>
<tr>
<td>32%</td>
<td>Reduced participation (-2%)</td>
<td>30%</td>
</tr>
<tr>
<td>13%</td>
<td>Increased participation (+3%)</td>
<td>16%</td>
</tr>
<tr>
<td>17%</td>
<td>Reduced participation (-3%)</td>
<td>14%</td>
</tr>
<tr>
<td>38%</td>
<td>Increased participation (+2%)</td>
<td>40%</td>
</tr>
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Original Index

Carbon Efficient Index

Recalculation based on GEE emissions
• Creating an effective **enabling environment** for investment in Sustainable Forest Management (SFM).

• Encouraging the development of mechanisms, including systems to attribute proper value, for the benefits derived from goods and services provided by forests.

• The implementation of **SFM** is critically dependent on **good governance** at all levels.

**At its outset, the AMAZON FUND must contribute to leaving the future Amazon generations a whole new array of regionally involved, capable, financially sound, transparent and accountable players that are able to support new sustainable development dynamics for the region.**
INDIVIDUAL EFFORTS ARE NOT ENOUGH

Global social responsibility and Kyoto’s principles call for global cooperation among nations in order to deal with the pressing global warming / carbon / energy problem.

“Differentiated responsibility” must be read not only in terms of individual-country emission reduction efforts and financial support to other nations but also in terms of the willingness to share the knowledge that will make the new low carbon economy happen.

COOPERATION IS A MUST
But this entails very strong mutual responsibilities:
- Cooperation is a two-way road (lessons to be learned from both sides)
- Recipient/less developed countries must do their homework:
  - productive agents must organize themselves and agree to cooperate in the development of “baseline” technologies and processes
  - strategic activities/sectors must be identified
  - incentives / overall efforts must be established and pursued

International cooperation on GHG emissions control should be replaced with intern. coop. in climate-related technological innovation and diffusion
Supportive Environment

We are not talking about technology transfer guarantees but of

- Economic Growth
- Infrastructure
- Education
- Capacity to reverse engineer and adapt to local conditions
- Governance
- Property Rights (IP protection)
- Industrial Policy

Or of the establishment of the jurisdictional “certainty” that favours an environment conductive to innovation, diffusion and adaptation of low-carbon (clean-tech) technologies. An environment with increased private investments leveraged by adequate market mechanisms and supported by national governments.

Long-term, international strategic partnerships provide a good starting point

Multilateral or intergovernamental funds to support the development and delivery of clean technologies might also be the appropriate instruments.
“prosperity and the reduction of poverty depend on maintaining the flow of benefits from ecosystems”

“successful environmental protection needs to be grounded in sound economics”

*TEEB Report*
BNDES Mata Atlântica (Atlantic Forest) Program

- Smaller than the Amazon, but similar range of biodiversity.
- Originally 330 million acres.
- 7% remains in excellent status of conservation.
- 60% of Brazil’s population.
- 80% of the GDP.

### CREATING JOBS AND DEVELOPING LOCAL ECONOMIES

- Income, training and education for residents in local communities
- **Potential restoration area: 17 m ha** (about twice the size of Portugal)
- Example:
  - Pedra Branca – RJ
  - 600 ha
  - Approx. **110** jobs created

Source: The Atlantic Forest Restoration Pact
A provision in the Cancun Agreement to allow sub-national REDD+ approaches as an interim measure to a second commitment period to reduce emissions opens the door for future forestry-based CDM and voluntary projects to be incorporated into sub-national programs.

The BNDES is discussing the development of a carbon inventory methodology (a GHG+ Protocol), which enables offsetting limited emissions with REDD+ projects. The BNDES understands that the combination of this new methodology with the stock market’s ICO2 Index may help bring together capital markets and REDD+ initiatives.

Note: REDD = Programs for Reducing Emissions from Deforestation and Forest Degradation.
The Amazon Fund’s Legacy

ENABLING ENVIRONMENT

SAFEGUARDS RECOGNITION AND OBSERVANCE

- Legal Conformity
- Recognition of rights and guarantees
- Equity – benefit sharing
- Sustainable economics and reduced poverty
- Environmental conservation and recovery
- Participation
- Monitoring and transparency
- Governance
The high-risk context in which REDD+ activities will take place has led to and increasing recognition of the importance of incorporating social and environmental safeguards as well as provisions to ensure good governance of REDD+

“In essence safeguards are measures to prevent adverse impacts, and as such are central to achieving emissions reductions”.

“The high-risk context in which REDD+ activities will take place has led to and increasing recognition of the importance of incorporating social and environmental safeguards as well as provisions to ensure good governance of REDD+

This approach seems to frame an environmental goal (emissions reductions) within a risk-return economic framework (of the expected financial flows). Its “sound economics” approach also appears to address the risk reduction needs of a green-growth strategy (as opposed to a sustainable development process).
PARADIGM SHIFT:

In this approach: “Redd+ will force governments to revisit the debate between development-centered policies (or growth) and environment-centered policies” (Recoftc Report)

REDD+ as a catalyst of a social and economic transformation of society, bringing it away from growth and more towards sustainable development.

SOCIAL TRANSFORMATION APPROACH

REDD+ A conservation focus and strategy that represents an opportunity to mobilize countries and reform the failed policies and practices that have driven forest loss

Safeguards The building blocks for good governance and the enforcement of REDD+

This last framework will only ensue if new metrics (Green Accounting) and a new mindset shifts in. Without a transformation of values and expectations we will still delve within a growth (and, possibly, unsustainable) environment.
Natural resources and *biodiversity* are economic *assets* that bring us tremendous opportunities (and some risks).

They must be preserved not only because of *ethical considerations*, but also the economic benefits they provide to existing and future generations.

Citizens may (and should) *hold governments and companies responsible* for the incorrect management of natural resources that provide important benefits to all and whose loss damages the well-being, health, safety and income of the population and, especially, the poor.
The BNDES’ approach

The BNDES’ role in designing and implementing environmental policies within Brazil:

- **Governmental agenda** – interaction with ministries and governmental bodies
- **Entrepreneurial Agenda** – interaction with companies and associations
- **NGO Agenda** – interaction with social and environmental organizations.
- **Stimulus for environmental self-regulation.**
- **The BNDES’ coordination of banks’ Green Protocol**