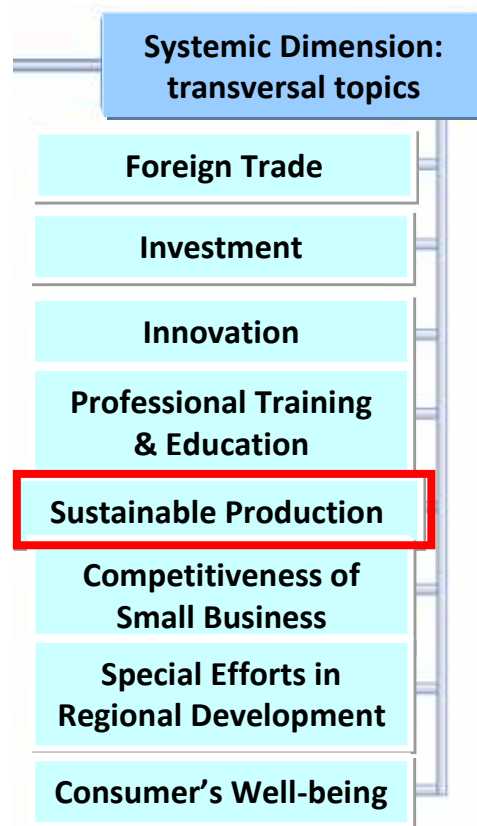


Strategy Session on Financing Green Growth

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**).

- ✓ 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.

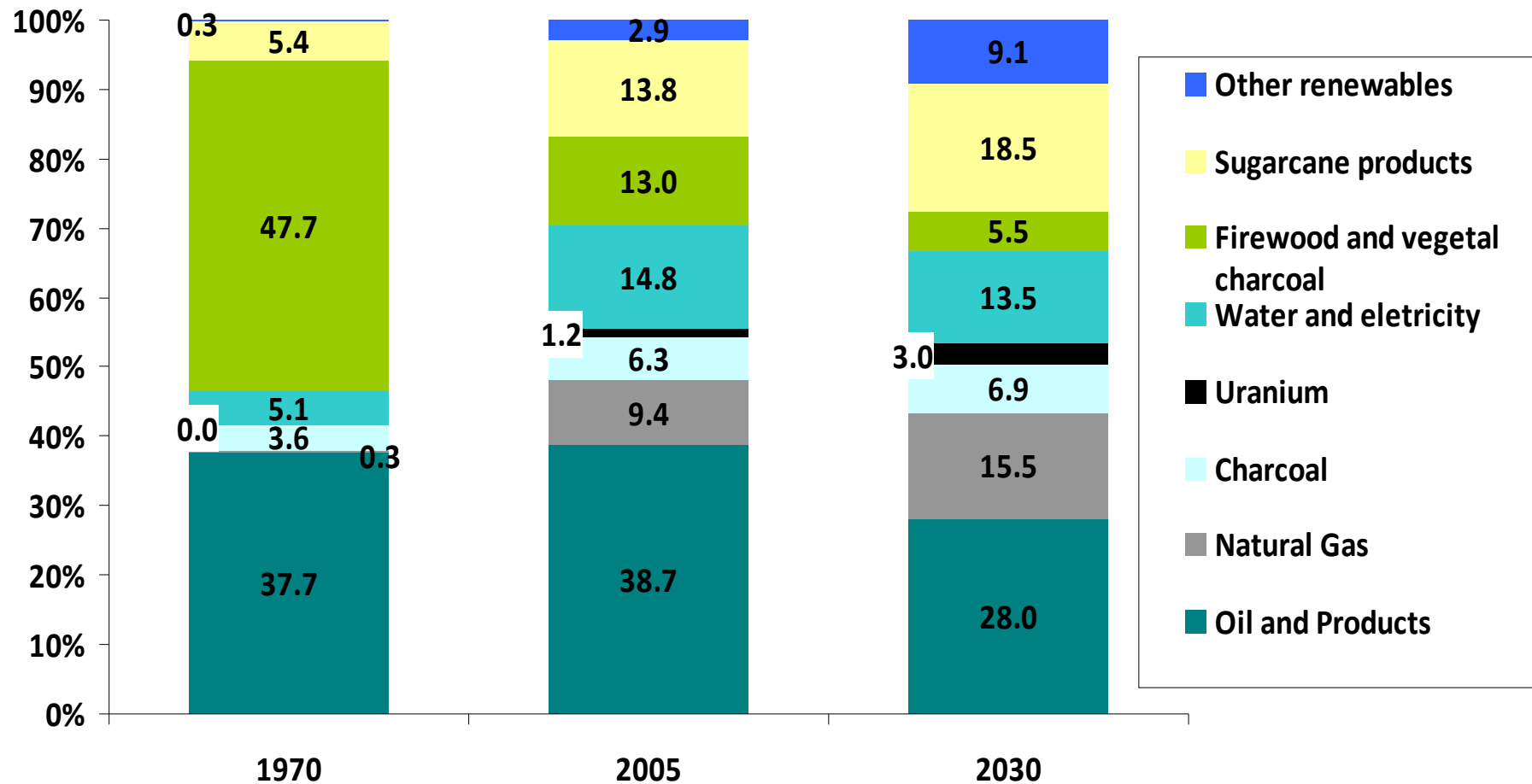
2014 GOALS

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)

**264.4 tep/
US\$ million
(2010)**

**240.4 tep/
US\$ million**

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



Source: Ministry of the Environment

Considering average GDP growth of 4.1% p.a.

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.

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*.

“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”.

TEEB Report

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.)



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**

EQUITY

DIRECT OPERATIONS:

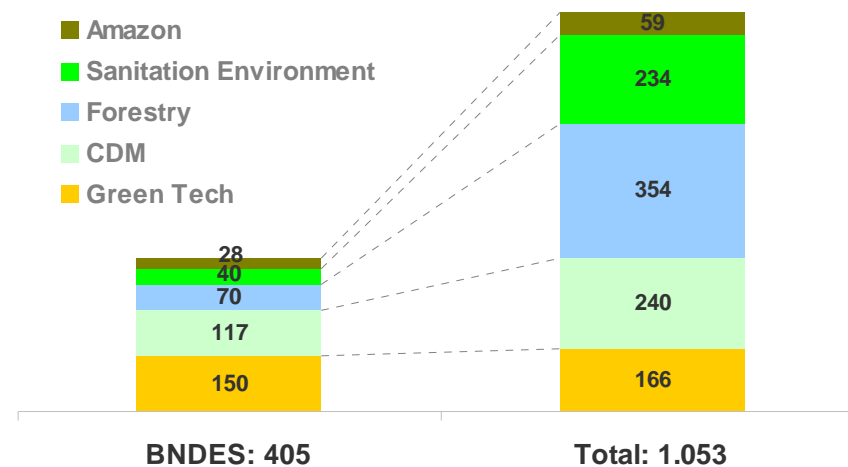
Sectors **directly** related to the **environment** or traditional sectors with technological **innovations optimizing** the use of **natural resources**:

- 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):



* 2 Funds being structured

FIXED INCOME

- Support Program for Energy Efficiency.
- Broad-spectrum of Environmental Lines.

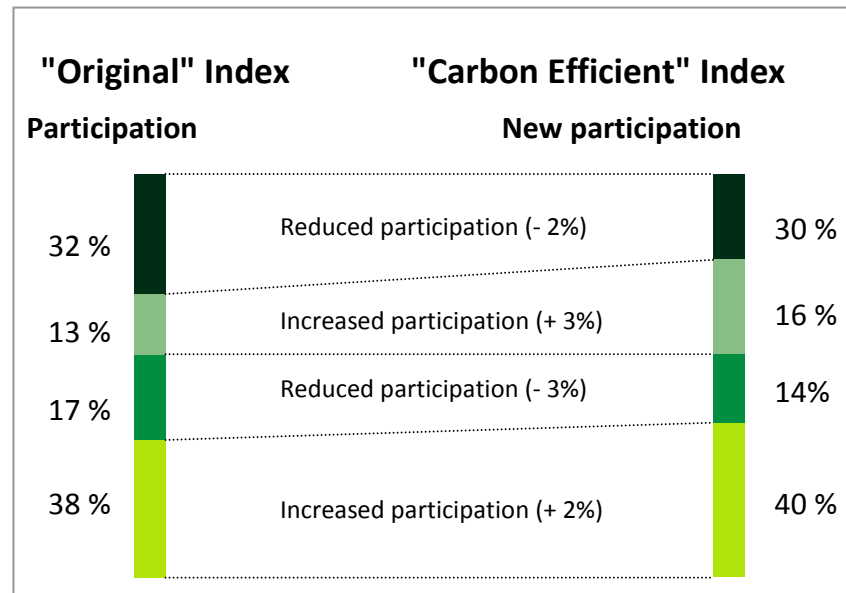
GREEN SECURITIES AND PRODUCTS

- 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)

Example



Recalculation based on GEE emissions

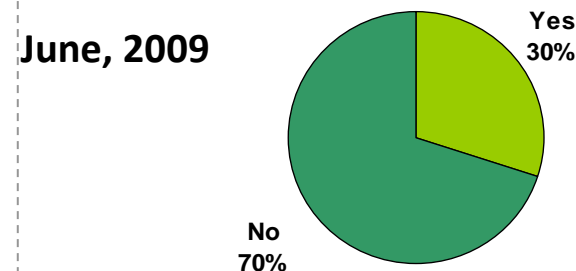
- Based on Brazilian IBrX-50 stock index
- Weight reduction in the index of stocks with the highest [tCO₂e emission/R\$MM of revenue] for each sector
- **Companies' participation is voluntary**

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

Previous Situation of IBrX-50 Companies

Companies that report data on emissions



Source: Websites, annual reports and sustainability reports.



- 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

**Cooperation (dictionary: n. common effort...)
Cooperate (vi. act together...)**



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

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 conducive 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 intergovernmental funds to support the development and delivery of clean technologies might also be the appropriate instruments



BNDES

*Brazilian
development bank*

Annex

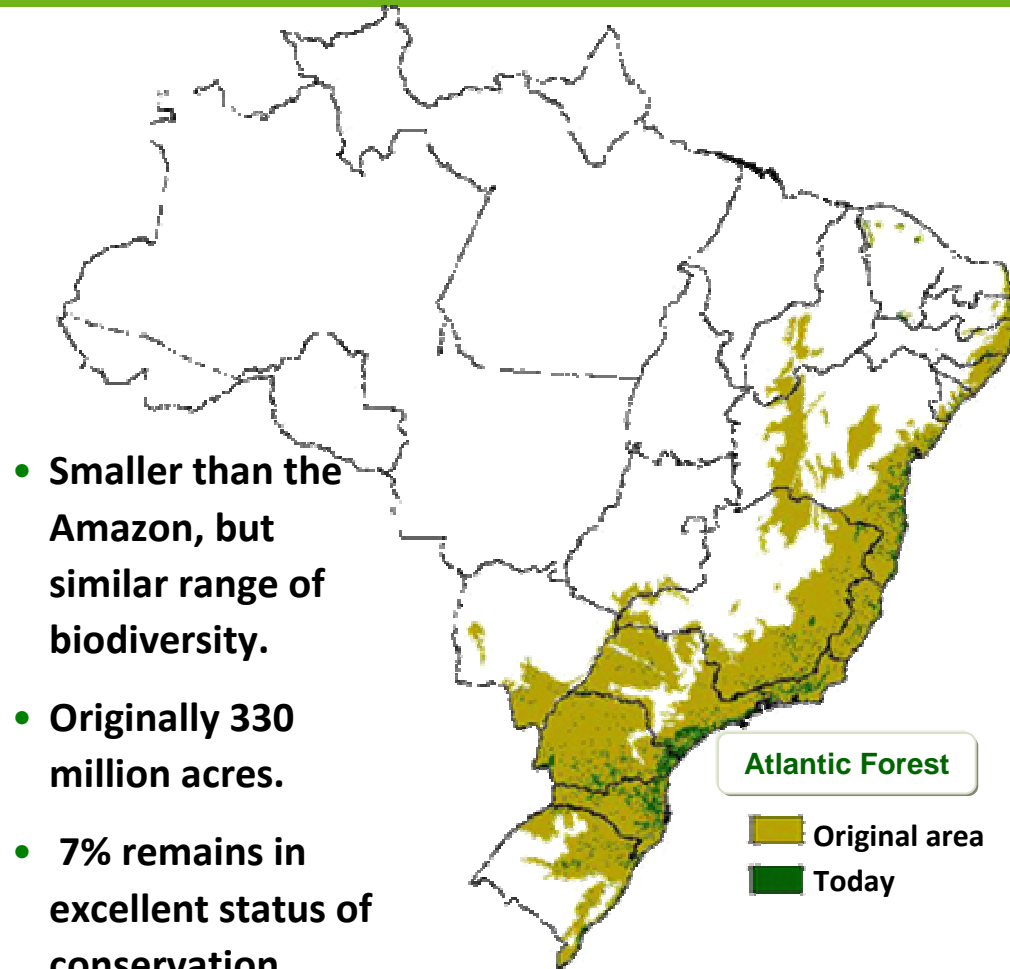


*“prosperity and **the reduction of poverty** depend on maintaining the flow of benefits from ecosystems”*

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

TEEB Report

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



- 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.

Source: The Atlantic Forest Restoration Pact

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

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**.

PREPARATION FOR A FUTURE MARKET-BASED MECHANISM

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.

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

TRADITIONAL ECONOMIC APPROACH

REDD+ → Reduction of Emissions


Safeguards → *“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+”*

Source: Understanding REDD+ - Global Witness Report – Nov 2010)

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).

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+

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.

PARADIGM SHIFT:



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

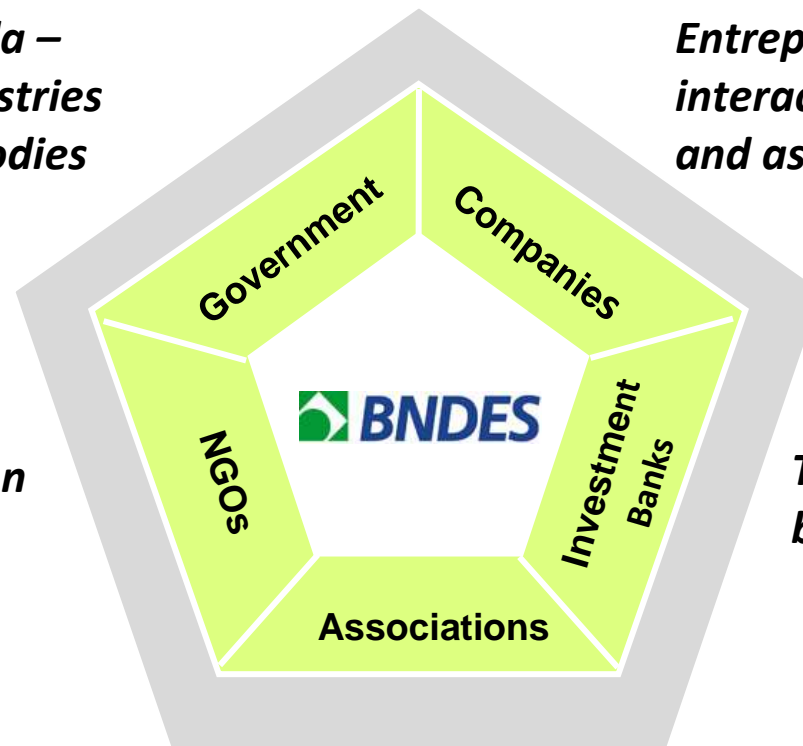
Citizens may (and should) **hold governments and companies responsible** for the incorrect management of natural resources that provide important benefits to all and whose loss damages the well-being, health, safety and income of the population and, especially, the poor.

The BNDES' 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.



The BNDES' coordination of banks' Green Protocol

Stimulus for environmental self-regulation.