



Brazil's Nationally Appropriate Mitigation Actions

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NAMAs presented by Brazil

(29/01/2010 Communication + UNFCCC/AWG-LCA/2011/INF 1)

Nationally Appropriate Mitigation Actions	Actions informed to Parties to the UNFCCC after COP 15	Range of Estimated Reduction in 2020 (million tons CO ₂ e)
Reduction in Amazon deforestation	80% reduction in annual deforestation rates in the Amazon in comparison to the average of 1996-2005	564
Reduction in Cerrado deforestation	40% reduction in annual deforestation rates in the Cerrado biome in comparison to the average of 1999-2008	104

NAMAs presented by Brazil

Nationally Appropriate Mitigation Actions	Actions informed to Parties to the UNFCCC after COP 15	Range of Estimated Reduction in 2020 (million tons CO ₂ e)
Energy	Energy efficiency	12 – 15
	Increase in the use of biofuels	48 – 60
	Increase in energy supply by hydroelectric power plants	79 – 99
	Alternative energy sources	26 – 33
Agriculture	Restoration of grazing land	83 – 104
	Integrated crop-livestock system	18 – 22
	No-till farming	16 – 20
	Biological nitrogen fixation	16 – 20
Steel Industry	Iron and steel - charcoal from reforestation	8 – 10

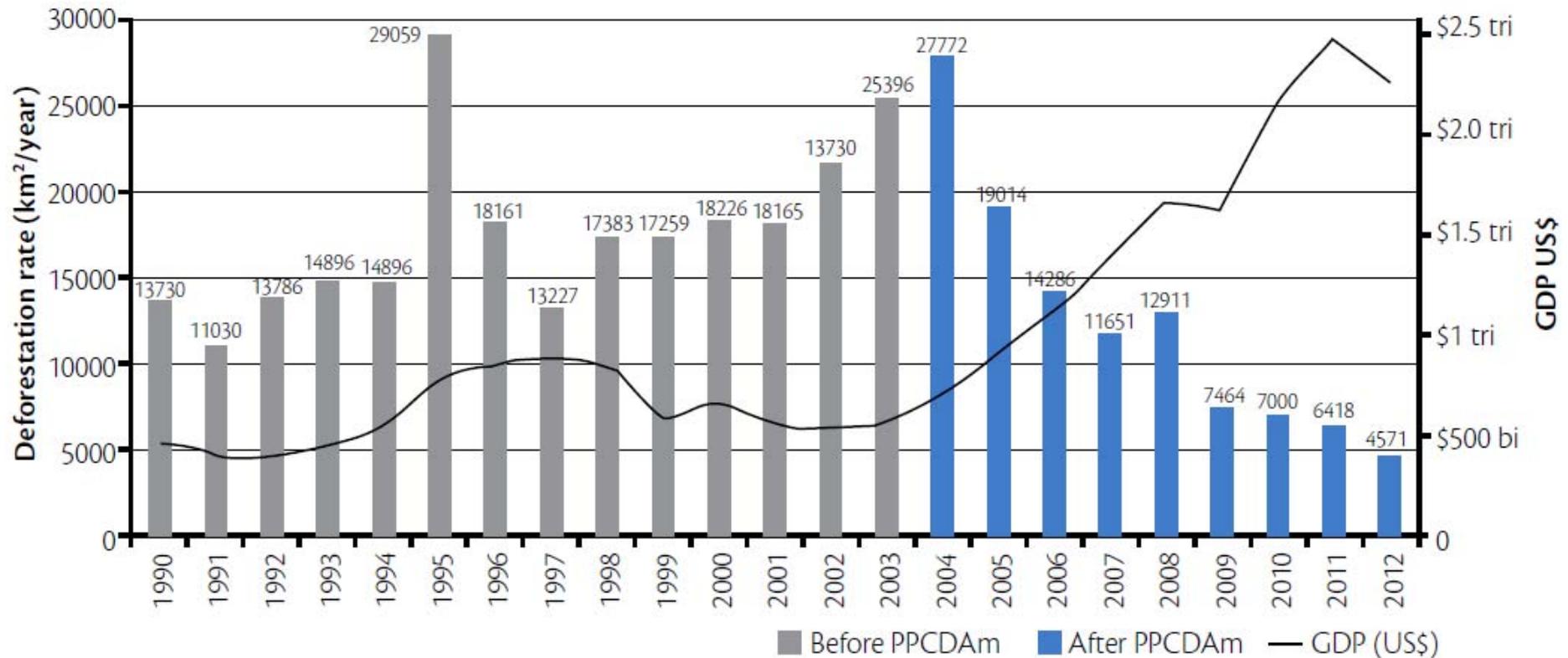
Assumptions

- Voluntary in nature;
- Implemented in accordance with the principles and provisions of the Convention, particularly Article 4, paragraphs 1 and 7, Article 10, paragraph 2(a), and Article 12, paragraphs 1(b) and 4;
- It is anticipated that the actions will lead to an expected reduction of 36,1% to 38,9% regarding projected emissions of Brazil by 2020.

Implementation

- The NAMAs are being undertaken by means of different instruments, including mitigation plans, action plans for the prevention and control of deforestation, as well as other Government initiatives

Deforestation rates in the Brazilian Amazon and the national GDP

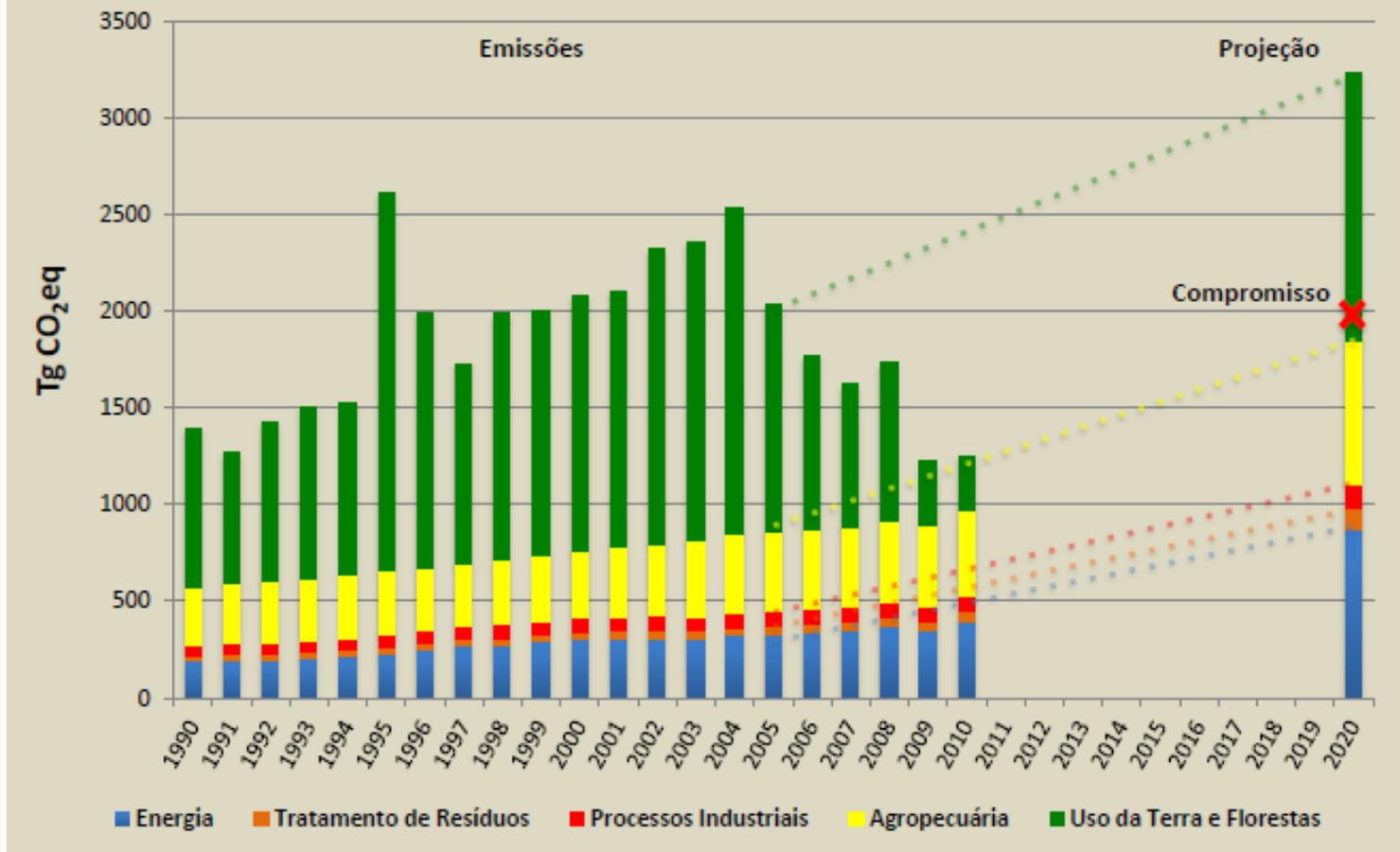


Source: Ministry of Environment of Brazil, 2012.

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Emissões brasileiras de GEE - Período 1990-2010 em CO₂eq + Projeção para 2020 e compromisso voluntário



Tg = milhões de toneladas. GWP CH₄: 21; GWP N₂O: 310

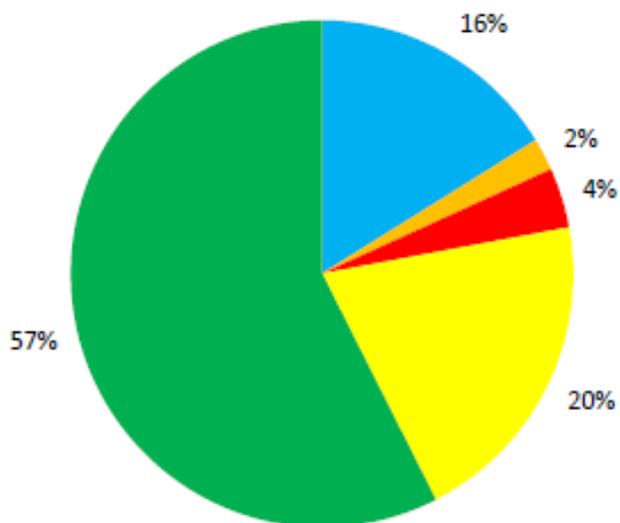
Source: Ministry of Science, Technology and Innovation of Brazil, 2013.

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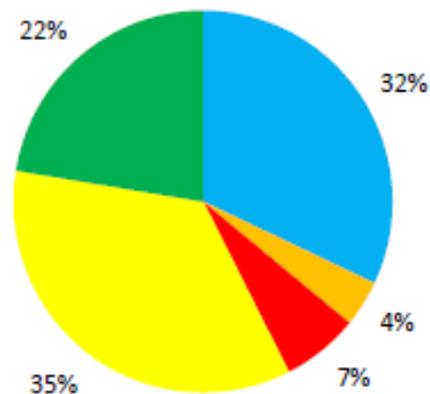
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Perfil de emissões

Emissões de 2,03 bilhões de toneladas de CO₂eq em 2005



Emissões de 1,25 bilhão de toneladas de CO₂eq em 2010



■ Energia ■ Tratamento de Resíduos ■ Processos Industriais ■ Agropecuária ■ Uso da Terra e Florestas

Source: Ministry of Science, Technology and Innovation of Brazil, 2013.

SMMARE

Modular System for Monitoring Actions and GHG Emissions Reductions

The Brazilian government is developing and implementing a modular system

Purposes:

- to monitor actions and, to the extent possible, their GHG emissions reduction achieved through the several actions of the Mitigation Plans;
- to help the analysis and management of the mitigation actions.

2 scenarios:

- Possible scenario: based in existing data and/or data that can be easily obtained, the monitoring of GHG emissions reduction could be done in the short-term at the national level;
- Ideal scenario: it would be necessary to improve the data collection in order to make the GHG emissions reductions monitoring in a more desaggregated level (e.g. emissions reductions at the territorial-unit level, due to decrease in deforestation; emissions reduction at the plant level due to implementation of a specific technology; etc.)

Each module will have:

- List of mitigation actions assessed (including their degree of implementation);
- Methodological assumptions;
- Results per mitigation action - “Indicators”;
- Quality Assurance and Quality Control procedures.

Institutions involved:

- Ministries (Environment; Agriculture; Mines and Energy; Development, Industry and International Trade; Transports; Cities); and

MITIGATION PLAN/MODULE	INDICATIVE INSTITUTION
PPCDAm	National Institute for Space Research (INPE)
PPCerrado	INPE and/or Brazilian Institute of Environment and Renewable Natural Resources (IBAMA)
ABC	Brazilian Company for Agricultural Research (EMBRAPA)
PDE 2020	Energy Research Company (EPE) National Agency of Petroleum, Natural Gas and Biofuels (ANP) Brazilian Electricity Regulatory Agency (ANEEL)
Industry	Technical Commission of the Industry Plan (CTPln)

Lessons learned from the development and implementation of SMMARE:

- 1) The participation of technical experts, with wide experience in national GHG inventory planning, implementation and review in the development phase is vital to achieve methodological robustness;
- 2) Each Mitigation Plan should have a Monitoring Module, able to assess the GHG emissions reduction achieved through the actions implemented by each Plan;
- 3) The dialogue with the Ministries responsible for each Mitigation Plan will provide the necessary political and operational guidance for each Monitoring Module;
- 4) The use of “external” institutions, with the necessary technology and human capital, will produce the key Indicators for each Monitoring Module in a cost-effective manner;
- 5) A software platform connecting all Monitoring Modules will ensure transparency and cost effectiveness of the system;
- 6) A general coordination is necessary to promote synergies and avoid duplication of efforts.

Conclusions:

- Brazil is constructing a system with domestic capacity, based on national circumstances and priorities;
- MRV can not cost the same as the Actions;
- MRV of unilateral NAMAs: monitoring, reporting and verification done under national circumstances, and following the guidelines for Domestic MRV;
- MRV of supported NAMAs: monitoring is done internally; reporting is done in the BUR (Biennial Update Report); verification is at the ICA (International Consultation and Analysis).

Mario Henrique Rodrigues Mendes

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