Brazil is one of the four BASIC countries with the tenth largest economy in the world. It produces 347.09 Mt of CO$_2$ per year$^1$ but according to the World Resources Institute its emissions in 2000 could well have been 851 Mt of CO$_2$ equivalent$^2$ - nearly double the estimates - as a result of emissions arising from deforestation in the Amazon.

Brazil is unusual in that the majority of its greenhouse gas emissions come from the forestry sector- effectively deforestation in the Amazon and land-use changes. Given this, Brazil has a very strong potential to reduce its emissions drastically by 2030 if efforts to arrest deforestation are successful. According to McKinsey, close to 85% of Brazil's potential to reduce emissions ('abatement potential') lies in reducing deforestation, and the costs associated with such abatement are lower than the world average$^4$.

Brazil’s per capita emissions at 1.86 metric tonnes are well below the global average but likely to increase as the economy becomes ever more industrialised.

**CURRENT COMMITMENTS**

At Copenhagen in December 2009, Brazilian President Luiz Inacio Lula, announced that Brazil's nationally appropriate mitigation actions (NAMAs) would be submitted to the UNFCCC. Since then the Brazilian government has committed to undertaking voluntary, domestic mitigation actions. The government has also acceded to the Copenhagen Accord, and officially acknowledged its support for the Accord.

Brazil’s mitigation commitment are intended to lead to a reduction of 36.1 to 38.9% deviation from Business As Usual (BAU) by 2020. This is intended to result from a variety of measures, a large number of which will focus on forest-related action. For example reducing Amazon and Cerrado deforestation, and restoring grazing land and other agricultural practices. Other key initiatives include energy efficiency measures and increasing the proportion of power coming from biomass, hydropower and alternative energy sources.

Brazil's National Plan on Climate Change (PNMC) was announced by President Lula in 2007 and identifies four key areas of focus: mitigation; vulnerability, impact and adaptation; research and development; and capacity building. The PNMC came into effect in December 2008 with targets projected under each proposed action. Since then, greater attention has been given to measures such as reducing deforestation, enhancing energy efficiency, and promoting renewable energy.
In terms of reducing Amazon deforestation, the objective is to reduce deforestation by 40% by 2009 and an additional 30% by 2013. In the energy efficiency sphere, the National Energy Efficiency plan aims to reduce electricity consumption by 10% by 2030. In addition, proposed actions under energy generation include adding 7000 MW of renewable energy, and under transport, to push for more public transport.

**CURRENT ACTIONS**

On 29 December 2010, Brazil passed a law formally recognizing the PNMC. The key instruments through which the PNMC will become effective include the National Fund on Climate Change (FNMC), fiscal and tax measures to provide stimulus for clean energy growth, as well as a Brazilian Emissions Reduction Market - an Emission Trading System along the lines of the EU-ETS.

In effect, Brazil is the first BASIC country to have passed a law that will operationalize its National Plan on Climate Change, under which actions are accountable to the Brazilian Parliament.

The government has also created a National Climate Fund (FNMC) with stipulations to make budgetary provisions for the FNMC under the national budget. The FNMC is expected to be further capitalized through monies coming from agreements, joint ventures and contracts, along with international, public and private donations.

Brazil is a leading biofuels power and this sector will continue to play a significant role in the Brazilian economy with plans to triple export of biofuels to over 9 billion litres of ethanol per year by 2015. In addition the majority of new cars sold domestically already come with the option of a dual fuel option - vehicles that run on gasoline, ethanol or a combination of the two.

The table below summarises a wider range of policies and measures undertaken by the Brazilian government on energy and climate issues (adapted from: IEA 2009).

<table>
<thead>
<tr>
<th>Policy Name</th>
<th>Type</th>
<th>Target</th>
<th>Status</th>
<th>Year</th>
</tr>
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<tbody>
<tr>
<td>Electric power auctions - Wind</td>
<td>•Regulatory Instruments</td>
<td>•Energy Production</td>
<td>In force</td>
<td>2009</td>
</tr>
<tr>
<td>Mandatory Biodiesel Requirement</td>
<td>•Regulatory Instruments</td>
<td>•Energy Production •Transport</td>
<td>In force</td>
<td>2008 (amended 2009 and 2010)</td>
</tr>
<tr>
<td>Brazil National Climate Change Plan</td>
<td>•Policy Processes</td>
<td>•Energy Production •Multi-sectoral Policy</td>
<td>In force</td>
<td>2008</td>
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<tr>
<td>Policy Name</td>
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<td>Electric power auctions - Biomass</td>
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<td>•Energy Production</td>
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<td>Programme of Incentives for Alternative Electricity Sources - Programa de Incentivo a Fontes Alternativas de Energia Elétrica - PROINFA</td>
<td>•Incentives/Subsidies •Regulatory Instruments • Tradable Permits</td>
<td>•Energy Production</td>
<td>In force</td>
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<td>Brazilian Climate Change Forum</td>
<td>•Education and Outreach •Policy Processes</td>
<td>•Multi-sectoral Policy</td>
<td>In force</td>
<td>2000</td>
</tr>
<tr>
<td>Interministerial Commission on Climate Change (CIMGC)</td>
<td>•Policy Processes •RD &amp; D •Education and Outreach</td>
<td>•Framework Policy</td>
<td>In force</td>
<td>1999</td>
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<tr>
<td>Utility energy efficiency obligation</td>
<td>•Regulatory Instruments</td>
<td>•Appliances •Buildings •Energy Production •Multi-sectoral Policy</td>
<td>In force</td>
<td>1998</td>
</tr>
</tbody>
</table>

EMISSIONS PROFILE

Brazil is one of the top contributors to global greenhouse gases in the atmosphere. A majority of the country's emissions come from burning forests in the Amazon, agriculture and land-use and land-use change (LULUCF) activities.

In Brazil’s 1994 National Communications to the UNFCCC, at 74%, carbon dioxide dominated the greenhouse gas profile of the country. Of this, deforestation was, and continues to be, the single largest contributor to emissions. 2005 estimates of key sources of GHGs still show forest and grassland conversion, at 51.9%, to be the single largest contributor.

On the other hand, with a major proportion of energy generation coming from large hydropower and biomass, Brazil enjoys relatively low dependence on fossil fuels for energy production. Close to 38% of Brazil’s power supply comes from renewable sources including large hydropower, sugarcane and wood, and nearly 83% of electricity needs are generated by hydropower.

Fossil fuel combustion accounted for just about 17% of the country’s emissions in 1994, with similar levels (16.8%) in 2005 a per Cerri et. al. 
KEY INSTITUTIONAL PLAYERS

The Department of Climate Change, under the Ministry of Environment (MMA) defines strategies and policies pertaining to climate change mitigation and adaptation to climate change.
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