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What is interesting about Brazil's INDC and what does it mean for the negotiations?

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Brazil released its intended nationally determined contribution (INDC) on the 28th of September. In this blog post we analyse the Brazilian INDC, and its implications for the negotiations. We use the [four questions](#) we have developed in order to structure our assessment of INDCs.

Does the INDC represent an acceleration and strengthening of climate action within the country?

Brazil pledged to reduce its emissions by 37% below 2005 levels by 2025 (1 300 Mt CO₂e in 2025), and to an indicative target of 43% below 2005 levels by 2030 (1 200 Mt in 2030). In 2012, the last year with available data, Brazil's total GHG emissions were 1 203 Mt CO₂e. So on the face of it, Brazil's INDC requires essentially a **stabilization of its total emissions** and leaves room for a small growth.

However, Brazil faces particular circumstances. It has massively **reduced emission from deforestation** (-85% from 2005 levels in 2012), while emissions from agriculture and the energy sector continue to grow (+7.4% and +35.9 respectively 2005-12). Both the agriculture and energy sectors have overtaken deforestation as the largest source of emissions; deforestation has declined from 1179 Mt CO₂e in 2005 to 176 Mt CO₂e in 2012. Brazil's INDC announces the intension to **reach zero illegal deforestation and zero net emissions from legal deforestation by 2030**.

With the mitigation challenging shifting to energy and agriculture, it is difficult to say whether Brazil's INDC represents an acceleration in climate action without looking in more detail at what is proposed in these sectors. Brazil supplied further clarification information on actions to implement its INDC, which enables some assessment of actions in these sectors. The table below summarizes some of these.

	2014	Intended level in 2030
Renewables in the energy mix	39.6%	45%
Renewables in the energy mix, excluding hydro	29%	28-33%
Renewables in electricity, excluding hydro	2.0%	At least 23%
Share of sustainable biofuel in the energy mix	5.6%	Approximately 18%

Source: Brazilian INDC and data from Enerdata. N.B. we have interpreted 'energy mix' to mean primary energy, in the absence of a specification of this in the Brazilian INDC.

Does the INDC contain clear and credible information about how the contribution will be achieved, and the transformations it requires?

Overall the Brazilian INDC is highly **transparent**, and provides a wealth of supplementary material regarding key transformations to achieve the INDC (see above for the example of the energy sector). The Brazilian INDC provides a very clear description of the **precise level of emissions targeted and methodologies used**. Given the importance of the **agriculture sector** (37% of total GHG, the largest source) and the growth of these emissions (7.4% in total 2005-2012), it would have been good to have a bit more information on the **mitigation objectives** of this crucial sector; although the Brazilian INDC details an ambition to restore 15 million ha of degraded pastureland by 2030 and establish 5 million ha of integrated cropland-livestock-forestry systems. However, **no sense is given of overall agriculture emissions**. In addition, **further information on energy demand** evolutions would help to clarify the energy sector targets discussed above; 45% renewables in the energy mix would mean very different things depending on the overall level of energy demand. This is particularly important in a country like Brazil, where managing energy demand growth is emerging as a crucial challenge (see below).

How does the INDC articulate with the domestic development priorities of Brazil?

As noted above, the crucial mitigation challenge for Brazil is shifting to the energy sector, whose emissions have increased by 35% since 2005. Here Brazil faces particular challenges, but also opportunities. Attractive hydro resources are in decline; and drought is having a disruptive influence on hydro production (production down 13% in 2014 compared to 2011 levels). On the other hand, Brazil has **huge wind and solar potential**, and these are experiencing rapid growth (compound annual growth rate for wind production of 40% over the last five years). The focus on the development of **non-hydro renewables** thus identifies a key challenge to reducing emissions from the energy sector. Brazil also **faces a strategic choice** regarding the role of oil in its transport sector. With the discovery of massive pre-salt oil reserves, there is concern that Brazil's leadership in sustainable biofuels might decline. However, with the Petrobras scandal and low global oil prices (pre-salt oil is deep water and expensive), the focus on sustainable biofuel production in the INDC may indicate a greater role for this important advantage that Brazil has in its socio-economic development.

What are the barriers and levers for going further?

In the energy sector, Brazil already has a very clean energy mix; the challenge is to keep it so. However, a further challenge in the energy sector relates to controlling the overall level of energy demand. Brazilian energy demand has been growing by about 5% per year in the last 5 years, compared to GDP growth of 2.8%. The energy intensity of the Brazilian transport sector is about 60% higher than its BRICS colleagues. So while the Brazilian INDC identified a 10% efficiency gain in the electricity sector as a key action, it might have been good to have some focus on the transport sector and energy efficiency more broadly. For example, in a [deep decarbonisation scenario](#) in Brazil, the efficiency of transport per passenger kilometre would need to be reduced by 40% by 2050.

What does the INDC mean for the international negotiations?

- **Commitment to a 5 year cycles of action on climate change** Brazil has set a target for 2025, and an indicative target for 2030. This idea of a five year 'firm' target period (2020-25), and five year 'indicative' target periods (2025-30), with targets being strengthened and extend in time every five years is an idea developed by IDDRI a paper ([The mitigation framework in the 2015 climate change agreement: from targets to pathways - PDF 1,80 Mo](#)) with the Chinese think tank NCSC. With a 2025 target, Brazil, like the US who also has a 2025 target, will come under pressure in 2020 to confirm its target for 2030; to do so, Brazil will also want other countries to revisit their 2030 targets in 2020. Brazil's adoption of a 2025 target increases the chances that the Paris agreement contains a rapid review clause, requiring countries to review their targets by 2020 (an idea developed in a second IDDRI paper [\[Regular Review and Rounds of Collective Action and National Contributions the 2015 Climate Agreement: A Proposal - PDF 1,85 Mo\]](#) with NCSC).
- **Climate finance** Brazil's INDC is not conditional on the provision of international financial support, although Brazil does state that enhancing action beyond its INDC would require financial support. With recent announcements from India that its contribution will also not be conditional on support, this strengthens the groundswell of unconditional INDCs from major emerging economies. Brazil also states that it will strengthen its support for developing countries. This is likely to help unblock discussions on climate finance. Developed countries have pushed for stronger contributions from richer emerging countries, in exchange for stronger pledges from themselves. With big new finance announcements from the UK and France on the developed side, and China on the emerging side, this *quid pro quo* seems to be emerging.
- **Differentiation** Brazil has become the first developing country to provide an absolute emissions cut as its INDC. Brazil has been a proponent in the negotiations of so-called 'concentric differentiation' in which countries would progressively converge towards more precise and stringent climate obligations. By shifting itself to an absolute

cut, Brazil has set the example of how this would work.

- ***Long-term deep decarbonisation*** the Brazilian INDC places its short-term 2025-2030 targets in the context of a long-term transformation to the decarbonisation of the global economy by the end of the century. This reflects the language of the German-Brazil declaration on climate change; like the US-China Joint Statement and the Chair's Conclusion from the head of states lunch on climate change this weekend, it emphasises the importance of the long-term decarbonization and strengthens the idea that Paris should recognize the importance of countries developing mid-century strategies towards this low-carbon future.

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