MAJOR ECONOMIES AND CLIMATE CHANGE RESEARCH GROUP

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Country Paper: Brazil and Indonesia (Land-use and agriculture)

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EXECUTIVE SUMMARY

Brazil and Indonesia are the 5th and 7th largest sources of greenhouse gas emissions (including LUCF) respectively in the world. As large non-Annex I countries, with populations of over 200 million for Brazil and nearly 250 million for Indonesia, these are two extremely important countries to focus on with respect to climate change. However, these two countries have quite different emissions profiles than the rest of the world. While energy production and other sectors produce significant emissions, land use, land use change, and agriculture account for well over half of total emissions in both Brazil and Indonesia. These unique profiles highlight the importance of investigating land use and agricultural emissions in these countries and how to mitigate them. The size of these countries and their emissions underscore our rationale for focusing on them in this report.

This report analyzes current sources of greenhouse gas (GHG) emissions in Indonesia and Brazil's Agriculture, Forestry, and other Land Use (AFOLU) sectors. AFOLU is responsible for the majority of each countries' GHG emissions. Deforestation is the primary driver of emissions in both countries and the majority of vulnerable forests are located in remote regions. Agricultural interests for palm (Indonesia) and beef and soy (Brazil) are the primary drivers of deforestation and forest degradation. While looking at sources and current emissions trends, this report discusses the agriculture landscape and the effect of the status quo on AFOLU emissions. Strategies for emissions mitigation, current initiatives and barriers to success are also discussed. Finally, we suggest strategies for weakening these barriers. Key findings are as follows:

(1) Deforestation in Brazil's Amazon and Cerrado is driven by cattle pasture expansion and soy plantation expansion, which displaces cattle ranchers. Preventing this will require solutions at all levels of government that take into account large agribusiness incentives.

(2) To meet its 36.1% to 38.9% emissions reductions target by 2020, Brazil's focus will almost absolutely be on deforestation. There is potential for emissions mitigation in the AFOLU sector. Current government initiatives including the ABC Plan, the PPCDAm, and the PPCerrado have set targets to reduce deforestation and deforestation through sustainable land management and agricultural practices.[1]

(3) Preventing peatland degradation and burning is particularly necessary if Indonesia is going to meet its emissions reduction commitment of 26 percent by 2020. This will require coordination among large palm producers, government entities, and smallholder farmers.

(4) The majority of mitigation strategies will not be feasible until local governance improves in both countries, in terms of coordination with the national government, inter-agency coordination, and inclusion of stakeholders and civil society.

Barriers

(1) **Legal uncertainty** regarding Brazil's Forest Code as well as lack of coordination among existing REDD+ initiatives and all levels of government put deforestation reduction in jeopardy. Despite some progress, Brazil's fragmented and politically polarized system is still a threat to REDD+ and the success of preserving the Forest Code.

[1] These plans are discussed in the "LUCF Mitigation Strategies and Policies" section for Brazil.

(2) **Agribusiness forms an immensely powerful lobby in both Brazil and Indonesia**. In Brazil this occurs most notably at the state level and in Indonesia at the province level. In addition, many of the countries' most powerful political actors are linked to these industries. In Brazil, this has led to Congressional policies that limit the ability and capacity for environmental NGOs and scientists to operate in the Amazon.

(3) **Access to credit and affordable financing instruments remain largely unavailable** for small to medium farmers. In addition, complicated and inefficient loan requirements by the Brazilian Development Bank (BNDES) hinder implementation of the ABC Plan.

(4) **Local government will and capacity** remain a major barrier in Indonesia. Due to the recent decentralization of Indonesia's government, coordination between local and national government as well as between government agencies is a major challenge.

(5) **Indonesians remain relatively apathetic towards environmental issues.** Forest and peatland preservation is not a priority among the Indonesian public. Consequentially, local politicians have little incentive to mitigate deforestation.

Recommendations

(1) **Improved policy transparency and inclusion of civil society/NGO/ relevant stakeholders in the process** in both countries. Climate policy makers must continue trying to include civil society groups, environmental NGOs, and relevant stakeholders (such as local and indigenous populations, forest managers, and public sector employees) to succeed in reducing GHG emissions.

(2) **Coordination between agribusiness and government in both countries to create sustainable supply chain standards**, especially for beef, soy, and palm industries. This could include providing economic incentives for firms complying with environmental recommendations and sustainable product labeling. In Indonesia cooperation over the swap of forest and peatland concessions for degraded land holds particular promise.

(3) **Increased funding for forest monitoring and law enforcement** in both countries. Brazil has made strides in monitoring with a sophisticated Landsat system, and Indonesia is currently building a similar system with the help of the World Resources Institute and funding from the Japanese government.

(4) **Brazil must improve the ABC Plan** by implementing a monitoring and evaluation group for the Plan. BNDES should revise ABC loan criteria by lowering interest rates for farmers who comply with environmental legislation.

(5) **Improve public training and education efforts in Brazil** to promote low-carbon practices for producers (small and large). Providing micro-credits for financing new techniques/technologies for smallholders can change farmer behavior.

(6) **Indonesia must address public indifference** by improving forest preservation advocacy through the work of local NGOs and sub-national REDD+ offices.

(7) **Improve local governance in Indonesia** through improving the quality of data available to local agencies and the capacity of agencies to share and standardize that data.