

Brazilian greenhouse gas emission reductions as an optimization problem: when the government chooses policy design

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This paper aims to evaluate the economic and environmental impacts of Brazilian greenhouse gas (GHG) emissions. The intention is simulating emissions targets in different possible scenarios for which the adopted policy design should take into account several questions, such as: What is the economic impact? Should the government intervene in all economic activities, imposing the same target? Alternatively, is it possible to reduce adverse effects by choosing specific sectors? The results highlight the importance of Livestock and Fisheries for Brazilians emissions counteracting to its economic significance. In the short term, sectoral Emissions targets could be developed in order to mitigate emissions but we suggest that in order to not overcharge the Livestock and Fisheries sector it is possible to create shared responsibilities distributing the targets for less pollutant sectors as well. However, for long term it will be indispensable the investment on technological improvements that permanently reduce pollution levels.