



GHG emissions and mitigation potential in Indian agriculture

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India is one of the world's largest greenhouse gas (GHG) emitter, accounting for about 5% of global emissions with further increases expected in the future. The Government of India aims to reduce emission intensities by 20-25% by 2020 compared with the 2005 level. In a recent departure from past practice the reconvened Council on Climate Change stated that climate change in agriculture would include a component that would focus on reducing emissions in agriculture, particularly methane and nitrous oxide emissions.

To develop recommendations for mitigation in agriculture in India, a baseline study is presented to analyse the GHG emissions from agriculture for current management (Directorate of Economics and Statistics of the government of India). This analysis is done for the two states Bihar and Haryana, which differ in their management and practises based on different climate and policies. This first analysis shows were the highest GHG emissions in agriculture is produced and were the highest mitigation potential might be. The GHG emissions and mitigation potential are calculated using the CCAFS Mitigation Option Tool (CCAFS-MOT) (<https://ccafs.cgiar.org/mitigation-option-tool-agriculture#.VpTnWL826d4>) with modifications for the special modelling.

In a second step, stakeholder meetings provided a wide range of possible and definite scenarios (management, policy, technology, costs, etc.) for the future to mitigate emissions in agriculture as well as how to increase productivity. These information were used to create scenarios to give estimates for the mitigation potential in agriculture for India in 2020.