

## Challenges and solutions for data on agricultural greenhouse gas emissions

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Abstract N.117:

IPCC Guidelines provide the methodological guidance for countries to report their annual inventories of greenhouse gas emissions and removals to the United Nations Framework Convention on Climate Change (UNFCCC). The methods contained in the IPCC Guidelines differ in their complexity ranging from the simplest Tier 1 method that are based on globally or regionally applicable default parameters; through Tier 2 methods based on country specific data; to Tier 3 methods involving more detailed modelling and/or inventory based approaches. The IPCC category Agriculture, Forestry and Other Land Use (AFOLU) presents a unique challenge to the inventory compilers especially from developing countries due to the paucity of national data.

The Food and Agriculture Organization (FAO) has long maintained global datasets on agriculture and forestry that constitute an extremely valuable resource for compilation of inventories of greenhouse gas (GHG) for the AFOLU sector as noted in the IPCC Guidelines. However, these datasets cater to a wide range of information needs and may differ from the data required for GHG compilation in certain key respects. In addition, GHG related data is needed by an ever increasing stakeholder community for a number of purposes. Assessing the environmental impact of agricultural products through life cycle assessments for example is becoming a key requirement in both the public and private sectors. To meet the new needs of stakeholders requires a broader set of data at a finer resolution.

The paper therefore highlights the major challenges and provides some suggested solutions for filling the data gaps in the agricultural sector as well as supporting the task of national inventory compilers and other stakeholders and highlights the additional benefits of improved estimates in GHG assessments from the agricultural sector.