



# GHG INVENTORY

## CASE STUDY/INSIGHT

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Quantifying GHG emissions are important for managing climate change. GHG emission inventories can be carried out at various levels. Maintaining an inventory of GHG emissions is the fundamental building block in a country's climate policy. Country level GHG inventories can provide a baseline of data and help in tracking the impact of domestic policies on GHG emissions, setting ambitious targets at national and sectoral level, evaluating GHG mitigation options for the low carbon pathway, capacity building need, etc. However, measuring and accounting emission for the entire country has its unique challenges. But it is a crucial step for any country that wants to effectively manage its contribution towards climate change.

As per climate change convention, every party has to develop, publish and regularly update the national inventories. All the non-Annex I parties have to submit the National Communication (NC) and Biennial Update Report (BUR) to the Conference of Parties (COP). These reporting include national GHG emission inventories and will be subjected to international consultation and analysis. IPCC has issued guidelines to estimate the national GHG inventories to ensure that the emission estimation is transparent, accurate, complete and consistent with the international quality standards.



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The IPCC has classified the GHG estimation approaches in three different Tiers (Tier 1 to 3), based on the quantity of information required and the degree of analytical complexity. Since Tier 3 requires more country specific data, most of the countries use a combination of Tier 1 and 2 approaches, which can apply default values wherever possible, while estimating the GHG emissions. Progressing from Tier 1 to Tier 3 generally represents a reduction in the uncertainty of GHG estimates.

In most of the Asian and African countries, monitoring and review of various government schemes, projects and programmes is confined to the financial and physical parameters. There is no assessment of GHG emissions and mitigation so far. It is further complicated by the fact that, within sectors, multiple agencies and departments collect different segments of data that have relevance for a GHG inventory. These challenges can be addressed only through the capacity building, institutional setup, engaging civil societies, NGOs, private sector units, etc.