

Brunei Darussalam's GHG Emissions and Emission Trends in the Energy Sector (2010 –2014)

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Abstract

The objective of the Climate Change Convention (UNFCCC) is to achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. It is, therefore, important for all parties to estimate and communicate their levels of greenhouse gas (GHG) emissions and removals by developing their GHG emission inventories, as mentioned in Article 4, paragraph 1 and Article 12, paragraph 1 of the Convention. Brunei Darussalam has submitted its first national communications along with its first national GHG inventory (2010) in April 2016. Currently the second national communications which covers 2014 inventory is under progress.

Brunei Darussalam's total gross GHG emissions in 2010 totalled 9,488.6 GgCO₂e, with corresponding net emissions of 6,612.4 GgCO₂e after taking into account CO₂ absorption by Land-Use Change and Forestry activities. The energy sector emitted 8,858.2 GgCO₂e, which is about 93% of the total gross emissions in 2010. Majority of the emissions came from the energy industries (4,176 GgCO₂e), followed by fugitive emissions from oil and gas activities (2,955 GgCO₂e), road transportation (1,171 GgCO₂e), manufacturing and construction (450 GgCO₂e), and residential sector (105 GgCO₂e). The emissions from the sector had increased by 13% between 2010 and 2014, the latter in which the emissions totalled 10,006 GgCO₂e. The contribution of each energy subsectors in the total emissions had slightly changed during the same period. The share of energy industries had increased from 47% to more than 53% while that of the road transportation had remained stable at around 13%. CO₂ and CH₄ are the main GHG gases generated by the energy sector. All the emissions were derived through Tier 1 estimates using the Revised 1996 IPCC Guidelines.

This poster will describe Brunei Darussalam's first national GHG inventory for the year 2010 for the energy sector and its data collection processes. Along the line, the summary of GHG emissions from 2010 to 2014 for the energy sector, along with the uncertainty assessments and the key category analysis, will also be included. Since the energy sector contribution is about 93% from the total gross emissions in 2010, this poster will be focusing only on the energy sector. This will also include emissions contribution from each of the energy sector's components.

References

Brunei Darussalam Initial National Communication, April 2016.