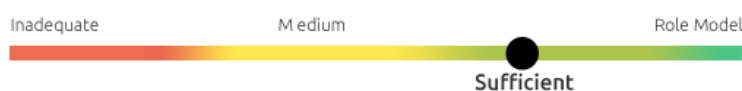
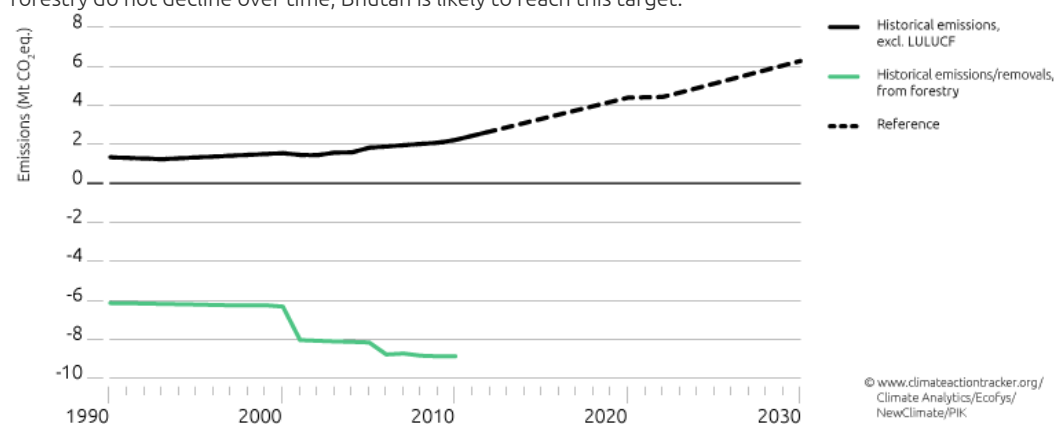


### Rating



### Assessment

Bhutan is rated Role Model as it has communicated its goal of remaining carbon neutral in the future. If current sequestration rates from forestry do not decline over time, Bhutan is likely to reach this target.



### Pledge

The forestry sector is pivotal for the Bhutanese carbon neutrality pledge, as its sequestration capacity currently exceeds GHG emissions. The Government also called on the international community to support this target. Forests currently cover 73% of the Bhutanese Landscape, and the country has a constitutional mandate to maintain this share above 60%. Government estimates found that the forestry sector in Bhutan provides ecosystem services worth \$14 Billion per year, four times higher than GDP (Royal Government of Bhutan, 2012).

In such a context, the country has also put forward the concept of "Gross National Happiness", in contrast with the established notion of "Gross Domestic Product", and the utilitarian political theory. However, the challenge is how to translate the "happiness maximisation goal" into domestic policies and measures (Duncan, 2013).

Specific actions have been taken in order to preserve forestry and for reducing fuel-wood consumption (as in the Sustainable Rural Electrification Project). In addition, Bhutan has set a target of 20 MW of renewable energy capacity in 2020 (ADP, 2013).

### Current policy projections

GHG emissions from Bhutan are negligible, as they amount to less than 2.23 MtCO<sub>2</sub>e (2010 data), which corresponds to approximately 3 MtCO<sub>2</sub>e per capita. Under current policy projections, GHG emissions will increase over time, driven by economic growth, up to 4.4 MtCO<sub>2</sub>e in 2020 (excluding forestry). However, if emissions/removals from forestry are accounted for, Bhutan emerges as a negative emitter.

With an estimated capacity of 30 GW, hydropower is the mainstay of the electricity sector, and also the main source of revenues for the Government, as it accounts for 19% of total GDP (Second National Communication). Bhutan is a net exporter of electricity, even though 40% of the population does not have access to it (Irena, Country profiles, 2009 data). In fact, the high cost of grid extension (roughly 14000 \$ per km) has hindered energy access domestically. As a result, 75% of domestic electric capacity is exported to India (Dorji et al. 2012). In such a context, in 2005, the Government implemented the "Rural Electrification Master Plan", which aims to achieve a 100% electrification rate. Despite emissions from electricity generation being negligible (as the hydropower is considered as carbon-neutral), further extension of the existing grid capacity will lead to higher GHG emissions. If the grid emission factor is accounted for, emissions from electricity sector are projected to reach 2.2 MtCO<sub>2</sub> in 2020 (Second National Communication). Also the cement industry is an important driver of GHG emissions that could reach 1.4 MtCO<sub>2</sub> in 2020, if additional policies will be not put in place (Second National Communication).

**Date of pledge:** 5 February 2010

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