GEF BENEFITS INDEX FOR CLIMATE CHANGE (GBI_{CC})

Background and Context

1. The GEF Benefits Index for Climate Change (GBI_{CC}) provides a relative ranking of countries for meeting the climate change objectives of the GEF under the Resource Allocation Framework. As the financial mechanism for the United Nations Framework Convention on Climate Change (UNFCCC), the GEF's climate change objectives are based on the guidance of the UNFCCC.

2. The UNFCCC, which became effective in March 1994, is an international acknowledgment that changes in the Earth's climate and its adverse effects are a common concern of mankind and calls for the widest possible cooperation by all countries. The UNFCCC seeks to stabilize atmospheric greenhouse gas concentrations at levels that would prevent dangerous anthropogenic interference with the global climate system. The Convention calls upon all countries to take actions to stabilize the climate in keeping with the principle of "common but differentiated responsibilities".

3. As the financing mechanism to the UNFCCC, the GEF provides new and additional grant and concessional funding to developing countries and countries with economies in transition to achieve global environmental benefits in climate change. The GEF supports the preparation of the national communications of developing countries to the UNFCCC. The GEF operational strategy for climate change placed initial emphasis on four Operational Programs that address long-term program priorities to mitigate climate change: the removal of barriers to energy conservation and energy efficiency; the promotion of renewable energy; the reduction of costs for low GHG technology; and promotion of sustainable transport. The GEF has supported limited activities to sequester carbon, but the goal of sequestering terrestrial carbon is largely a secondary benefit of projects in the biodiversity or land degradation focal areas.[1]

4. The guidance to the GEF on adaptation calls for the GEF to support Stage I and Stage II adaptation activities in the context of national communications. More recently, the Council has responded to guidance from COP7 and COP10 by approving resources for a Strategic Pilot on Adaptation (SPA), intended to provide support for adaptation activities in the various focal areas in which GEF works.[2]

GEF Benefits Index for Climate Change

5. The GEF Benefits Index for Climate Change seeks to determine the potential global benefits that can be realized from climate change mitigation activities in the country. It is constructed from two indicators: (i) baseline GHG emissions for the year 2000 in tons of carbon

---

[1] GHG emissions from land use are less certain than GHG emissions from fossil fuel combustion. The World Resources Institute estimates that land use changes accounts for approximately 30% of total worldwide GHG emissions. See Climate Analysis Indicators Tool of the World Resources Institute. (cait.wri.org)

[2] In addition, the GEF operates the Special Climate Change Fund (SCCF) and the Least Developed Countries Fund (LDCF), both of which support projects designed to meet countries adaptation needs. In future, the GEF also to operate the Adaptation Fund.

equivalent; and (ii) Carbon Intensity Adjustment Factor computed as the ratio of the carbon intensity in 1990 to the carbon intensity in 2000.

$$GBI_{CC} = \text{Baseline GHG Emissions} \times \frac{\text{Carbon Intensity}_{1990}}{\text{Carbon Intensity}_{2000}}$$

6. Baseline GHG emission levels provides a broad measure of the scale of the mitigation potential of a country, while avoiding perverse incentives that results from using current level emissions. To ensure widest coverage among countries, the year 2000 is used as the base year. Including baseline GHG emission levels in the GBI results in a larger GEF Benefit Index for larger emitters. There are two reasons for using GHG emission levels. First, in general, countries with larger emissions have lower abatement costs, which increase less rapidly with abatement than those in countries with smaller emissions. Second, projects are likely to have greater demonstration and learning effects in high emitting countries than in countries with smaller levels of emissions.

7. The carbon intensity of a country measures the tons of carbon equivalent emitted by a country per unit of economic activity (GDP). It changes over time because of (i) increased carbon efficiency brought about by changes in fuels or technology or economic growth; and (ii) structural shifts in the economy away from carbon intensive activities. There are two reasons for using change in carbon intensity. First, reducing emissions will be less costly in countries that have already demonstrated willingness and/or ability to reduce carbon intensity. Second, it rewards countries that have reduced their carbon intensity levels.

8. National communications to the UNFCCC provide detailed and accurate GHG emissions inventories. At present, their coverage is still too limited to cover all of the countries eligible for GEF support in a consistent manner. [3] To ensure both comprehensiveness and comparability, standardized carbon emissions data available from the Climate Analysis Indicators Tool (CAIT) unit of the World Resources Institute are used in the calculation of the GEF Benefits Index.[4] Comparisons of the CAIT data with the corresponding data reported by countries in their national communications to the UNFCCC show a high degree of correlation between the two datasets.

9. In keeping with the current programs and strategies of the GEF, only carbon emissions from fossil fuel combustion and cement and the emission of other GHG gases are included in the baseline GHG emissions. Specifically, GHG emissions associated with land use changes have

---

[3] Out of the 160 countries eligible for GEF support, only about 100 countries have provided national communications to the UNFCCC with details of the GHG inventory for a base year. While most of the initial national communications have been for the year 1994, a number of countries have reported their inventories for a different base year. The second national communications (SNC) should provide a more consistent basis for emissions data than did the first. However, this data will not be available for several years. In the future, information taken from inventories found in national communications may be used to generate the global benefits index for climate change.

[4] Additional information on the World Resource Institute's CAIT tool can be found at cait.wri.org.

not been included in the baseline figures. The distribution of baseline GHG emission levels (year 2000) across eligible GEF recipient countries is shown in Figure 2.1. Countries have been sorted based on their baseline GHG emission shares and are shown from left to right. For each country, the graph shows the percentage share of total GHG emission among the eligible GEF recipient countries. The distribution is highly skewed with 30 countries accounting for 85% of total GHG emissions, while the remaining 137 countries account for the remaining 15% of total GHG emissions.

10. The distribution of the carbon intensity adjustment factor, measured as the ratio of the carbon intensity in 1990 to that in 2000 is shown in Table 2.1. The carbon intensity in three-fourths of the countries has decreased during the 90's and increased in the remaining countries. While it has changed by less than 10% for many countries, the changes are quite substantial for a large number of countries. Carbon intensity has decreased by between 10% and 25% in 21 countries and by more than 25% in 39 countries during the 90's. In contrast, the carbon intensity has increased by between 10% and 25% in 12 countries and by more than 25% in 9 countries. The carbon intensity adjustment factor is not available for 22 countries. For these countries the GBI is solely based on the baseline GHG emissions with no adjustment for carbon intensity.

11. The distribution of the GEF Benefits Index for Climate Change, which includes the change in carbon intensity, is also shown in **Figure 2.1**. This distribution is quite similar to the distribution of baseline GHG emissions.

Figure 2.1:

Share of Baseline GHG Emissions and Climate Change GBI

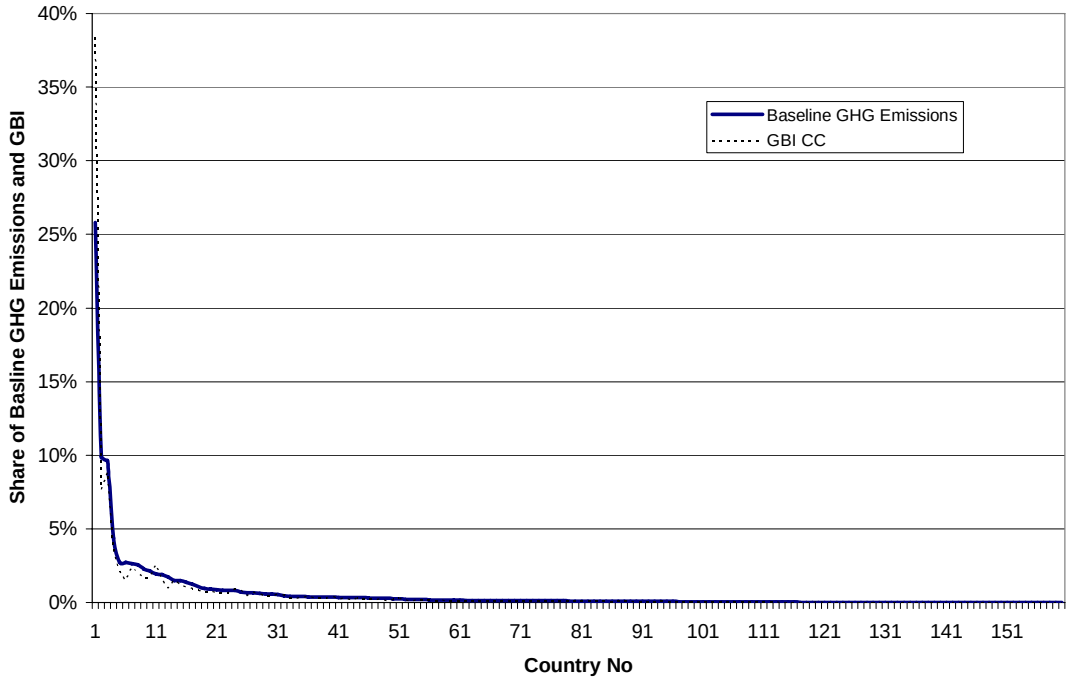

Table 2.1: Distribution of Carbon Intensity Adjustment Factor

Carbon Intensity Adjustment Factor	No of Countries
Greater than 2	4
1.25 to 2	35
1.1 to 1.25	21
1.0 to 1.1	39
0.9 to 1.0	18
0.75 to 0.9	12
0.5 to 0.75	9
Not available	22