



## **Papua New Guinea**

*Suggested Approaches for forest reference emission levels and  
forest reference levels for REDD+*

**UNFCCC Expert workshop**

**Bonn, Germany, November 13, 2011**

# PRINCIPLES

---



- **Environmental Integrity and Cost Effective:** The Reference Emission Level and the Reference Level are the key elements to ensure the environmental integrity and the cost effectiveness of the REDD+ mechanism.
- **Social and Economic Viability:** REDD+ will succeed only if local and indigenous communities will be able to preserve our forests while being competitive compared to other economic drivers (i.e. food security) and mitigation actions.

## SCOPE AND PURPOSE

---



- **Performance Benchmarks:** The REL and RL must be considered transparent benchmarks for assessing a country's performance in reducing total emissions and increasing removals associated with REDD+ activities implemented by the Party.
- **Transparent and Quantifiable:** The comparison of the current level of emissions and removals with REL and RL is needed to assess whether and how policies and measures implemented for REDD+ have resulted in quantifiable mitigation actions, and is expected to be used to determine the appropriate REDD+ financing and incentives for a particular Party.

## Elements for the construction:

---



- **Transparent and Conservative:** The RL and REL should be characterized by a transparent and conservative approach.
- **Driven by best Scientific Data:** The REL should be data driven, based on historical data and estimates should be verified scientifically.
- **Allow Historical Satellite Data:** Historical data on emission factors are not existing in almost all the REDD+ countries, thus historical data should be based mainly on satellite data from 1990, 2000 and 2005 (and potentially 2010)

## Elements for the construction:

---



- **Fact Based:** The gaps in historical data do not allow to build REL with annual accuracy and also bring into question projections for future trends based on past trends (BAU)
- **Account for National Circumstances:** The REL should be developed through conservative approaches in combination with assumption and adjusted following national circumstances, allowing an 'adjustment factor' (AF)
- **Periodic Updates:** The REL and RL shall be periodically recalculated, such as every five [5 years].

## Elements for the construction:

---



- **National Circumstances:** The AF should be built on national circumstances, address different social and development needs, and use the most recent relevant information (as per Decision 4/CP.15)
- **Equitable Distribution:** The AF should foster equitable distribution of the REDD+ positive incentives, ensuring the full implementation of the principle of “common but differentiated responsibilities” even among the REDD+ Parties.
- **General Rule:** the AF should be  $> 1$  for countries with low deforestation rates and high social and development needs, while  $< 1$  for countries with high deforestation rates and low social and development needs.

# Modalities for the construction: REL



$$\text{REL} = \left[ \begin{array}{c} \text{10 years} \\ \text{average of} \\ \text{the annual} \\ \text{area} \\ \text{deforested} \end{array} \right] \times \left[ \begin{array}{c} \text{Lower level of} \\ \text{emission factors} \end{array} \right] + \left[ \begin{array}{c} \text{10 years} \\ \text{average of} \\ \text{the annual} \\ \text{area} \\ \text{degraded} \end{array} \right] \times \left[ \begin{array}{c} \text{Lower level of} \\ \text{emission factors} \end{array} \right] \times \text{AF}$$

**REL = average of the historical emission calculated with a conservative approach multiplied for the Adjustment Factor**

- The average of annual area should be estimated by average of annual data (e.g. Brazil) or by average obtained from 5-10 years cumulative analysis (e.g. EU Trees or FAO FRA)
- The lower level of the emission factor is the minimum value for a type of forest registered in the region. In case of missing data IPCC lower range value of the default data could be used

# Modalities for the construction: RL

---



$$RL = \left[ \begin{array}{c} \text{Area of} \\ \text{forest land} \\ \text{remaining} \\ \text{forest land} \end{array} \right] \times \left[ \begin{array}{c} \text{Carbon stocks} \end{array} \right] \times AF$$

**RL = is the amount of forest carbon stock in forest land remaining forest land at the beginning of each implementation period multiplied for the Adjustment Factor**



# REL/RL for the REDD+ Accounting:



For the activities, reducing emission from deforestation and forest degradation, a NET-NET approach should be used, while for the activities, sustainable management of forest land, and enhancement and conservation of forest carbon stock, a GROSS-NET approach should be used.

With these approach the REDD+ mitigation performance of a country is equivalent to:

