

# Reducing Emissions from Deforestation: combating climate change

## What is The Problem?

- **More than 10 million ha of tropical forest (an area the size of Guatemala)** are cleared every year worldwide. Cumulatively, an area larger than the size of India has been cleared of tropical forest since the first UN conference on the environment in 1972.
- The IPCC has concluded that deforestation is responsible for **15-25% of global annual greenhouse gas (GHG) emissions**. In other words, 1 of every 5 tons of CO<sub>2</sub> emitted into the atmosphere each year comes from deforestation.
- If deforestation rates over the last decade continue, **Brazil and Indonesia's deforestation emissions, alone, will negate 80% of the emissions reductions** gained by implementing the Kyoto Protocol from 2007 to 2012.

## Why does it Matter?

- **Atmospheric CO<sub>2</sub> concentration is rapidly approaching 400 ppm** and over the past 35 years this increase has been associated with increasing land and sea surface temperatures, rising sea levels, and more severe extreme weather events. Scientists believe the rise in surface temperatures is an outcome of increasing CO<sub>2</sub> concentrations.
- The changes already underway may cause **severe population and infrastructure dislocation** in coastal regions of continental nations, **where most economic activity takes place**, and **even greater problems in small island developing states**, which comprise more than a quarter of all developing nations.
- To limit these effects, scientists believe **we must limit global average temperature rise to 2° C above pre-industrial levels** by stabilizing CO<sub>2</sub> at 450 ppm. This will require **reducing industrialized country emissions 80% below 2000 levels by 2050**.
- **Controlling tropical deforestation could make a major contribution to reducing global CO<sub>2</sub> emissions**

## How do we Fix it?

- There is currently a **multi-lateral agreement to limit carbon emissions** - the UNFCCC's Kyoto Protocol. However, it excludes avoided deforestation.
- If it is **extended to Reducing Emissions from Deforestation and Degradation (REDD)** - Forest carbon will be monetized and traded in a new carbon market.
- This will **create a competing economic value for standing forests** vs. clear cutting, cattle ranching, or other agricultural uses.

- Several independent analyses suggest that U.S. \$ 5-10 billion annually in this new market would **cut tropical deforestation rates in half**.
- Additionally, credits for reduced emissions from deforestation and forest degradation (so-called **REDD credits**) will:
  - (1) provide **a new revenue stream for developing countries**,
  - (2) provide **an additional opportunity to reduce CO<sub>2</sub> emissions other than reducing industrial sources**, and
  - (3) create a **strong economic incentive to conserve forests**, the species they host, and the ecosystem services they provide.

### What is the Logic of REDD Credits?

- If a hectare of moist closed canopy tropical forest is cleared, the large amount of carbon stored in the forest will be released to the atmosphere as CO<sub>2</sub> as the wood is burned or decomposes.
- A hectare of intact moist closed canopy tropical forest has a carbon stock of 150 to 240 tons of carbon, which would translate into 500 to 750 tons of CO<sub>2</sub> “equivalence.”
- Thus, not cutting a hectare of intact moist closed canopy tropical forest is the equivalent of not releasing 500 to 750 tons of CO<sub>2</sub> into the atmosphere.
- A forest owner in Ecuador who decides to avoid cutting a hectare of forest (thus not releasing 750 tons CO<sub>2</sub>) should receive the same carbon credits to trade as a factory owner in Belgium who reduces his CO<sub>2</sub> emissions by 750 tons below his allowable quota.
- Currently, the forest owner gets no carbon credits for conserving forest and thus has no economic incentive to preserve the forest or reduce the CO<sub>2</sub> emissions that come from clearing the land.

### How will REDD credits comply with UNFCCC standards?

- **REDD credits will be additional**, in that they will be scaled to the quantity of emissions prevented that would otherwise have been emitted into the atmosphere.
- **REDD credits will be permanent**, in that all emissions reductions from avoided deforestation will be expected to be permanent by UNFCCC standards (60 years).
- **REDD credits will be measurable**, in that all reductions in deforestation will be measured against rates of deforestation over an historical reference period with negotiated country-by-country adjustments.
- **REDD credits will be national**, in that compliant reductions will be determined against a national scale historical reference period – preventing “leakage”.
- **REDD credits will be verifiable**, in that all national estimates of deforestation will be verified by an independent third party.