

# Side event

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SOLAR, Grand Hyatt



## Reducing Emissions from Deforestation and Degradation (REDD): Steps towards a mitigation mechanism

### Panel:

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### We will identify critical steps in the negotiations:

1. Carbon pools: Improved national carbon stocks in forest biomass and soil
2. Towards a sustainable and effective mitigation mechanism
3. The potential supply of REDD to future emission reductions
4. Next steps for implementing the REDD mechanism

### 1. Carbon pools: Improving forest biomass and soil C estimates is feasible and will clearly increase the accuracy and precision of national carbon stocks estimates.

A REDD mechanism requires knowledge on the amounts of carbon in tropical forests. Thus, estimates on national REDD potentials are limited by uncertainties in carbon stock estimates. This presentation identifies the potential of refining national biomass carbon stock estimates by addressing and quantifying their principal sources of uncertainty: It advocates 1) a standard procedure of partitioning national forest cover into forest types, 2) improving forest inventory procedures, 3) the local establishment of allometric equations, and 4) an intensified focus on wood density implications. This presentation demonstrates that such efforts eventually pay off in form of higher accuracy and precision in national carbon stock estimates and thus assist in identifying national REDD potentials.

Current data limitations are no longer of technical nature but a matter of implementation within the next years.

## **2. Towards a sustainable and effective mitigation mechanism**

The negotiations in Bali focus on a REDD mechanism in developing countries. However, it should be recognized that risks of carbon losses from forests occur in all countries. A future climate change agreement would be more effective if it included all carbon losses and gains from land use in all countries. The REDD mechanism will be an important step towards reducing emissions from land use change in developing countries, but should become part of a larger land use mechanism that gives incentives to conservation and sustainable land management. A national approach to REDD and significant coverage globally are needed to deal with the risk that deforestation and degradation activities are displaced rather than avoided. A stable incentive and control system for maintaining forest carbon stocks needs to be established. Such a system goes beyond reducing emissions from deforestation and needs to include incentives for forest conservation and sustainable forest management (Mollicone et al. 2007).

## **3. The potential supply of REDD to future emission reductions**

Based on simple assumptions, we estimate the magnitude of potential supply of emission reduction credits in 2020. Two scenarios are constructed which assume that a set of four developing countries (including Brazil and Indonesia) reduce their rate of deforestation by 5 % and 10 % per year respectively (as compared to a scenario in which the deforestation rate remains the same as in the period 2000-2005). Such optimistic scenarios yield a potential supply of emission reduction due to reduced deforestation of 1-1.6 Gt CO<sub>2</sub>. This is an amount of 1 to 1.5 times the Kyoto cap of the first commitment period. Moreover, it would represent between 5-8 % and 8-12 % of global emission reductions necessary to achieve stabilisation of GHG in the atmosphere at 450 ppm and 550 ppm respectively, in the year 2020. These proportions are considerably higher, if compared to necessary emission reductions of Annex I countries to achieve the mentioned stabilisation levels. Linking this REDD supply to the carbon market might therefore be problematic with regard to the stability of the carbon market.

## **4. Next steps for implementing the REDD mechanism**

For accounting purposes, the final estimates for reference emission levels and commitment period emissions do not necessarily need to be very accurate, but they need to be consistent over time and they should be conservative.

A different approach for countries with low historic deforestation rates should be implemented because the objective to underpass historic emission levels is not applicable for such countries. It is suggested to develop criteria for the identification of tropical countries with low historic deforestation levels as a first step. If participating countries fulfil these criteria, compensation for continuous low deforestation rates could be calculated on the basis of the reference could be the average reduced annual conversion area calculated on the basis of all countries participating in the RED mechanism.

Mollicone, D. et al. 2007. Elements for the expected mechanisms on „Reduced Emissions from Deforestation and Degradation, REDD“ under UNFCCC. Environ. Res. Lett. 2 (2007) 045024, available at [erl.iop.org](http://erl.iop.org).