

Technical note:

## **Calculating 2013 performance based payments to Guyana based on interim performance indicators and enabling activities**

### **Step 1: Assess “avoided emissions from deforestation” as compared to the established reference level.**

According to the Interim Measures Report and the independent verification report, the gross deforestation in Guyana (interim indicator 1) during the fourth reporting period (Jan 1st 2013 – Dec 31st 2013) equaled 0.068 % of Guyana’s forest area. The reference level is, as stipulated in the Guyana-Norway Joint Concept Note (December 2012-revision), 0.275 %. Given Guyana’s total forest area of 18 487 876 hectares at the start of the fourth reporting period, and the difference between the reference level and the actual deforestation of 0.207 percentage points, this yields 38 270 hectares of “avoided deforestation”.

Applying a conservative carbon factor of 100 tons per hectare, gives 3 827 000 tons of avoided carbon emissions. This carbon figure is converted to CO<sub>2</sub> by multiplying with 3.67 (reflecting the added weight when one atom of carbon is joined by two atoms of oxygen to form CO<sub>2</sub>), yielding 14 045 055 tons of avoided CO<sub>2</sub> emissions.

### **Step 2: Calculate value of “avoided emissions from deforestation”**

The volume of avoided emissions is multiplied with a fixed price of 5 US Dollars per ton of CO<sub>2</sub>:

$$14\,045\,055 * 5 \text{ USD} = 70\,225\,273 \text{ USD}$$

### **Step 3: Subtract increased emissions from forest degradation, based on interim indicators.**

**Note:** Forest degradation is particularly challenging to assess and quantify without a well developed system for forest measuring and monitoring. The partners have agreed to a set of interim degradation indicators, which will be gradually phased out as a more sophisticated forest carbon accounting system is implemented in Guyana. The degradation indicators yield only rough estimates of forest degradation though significant improvements have been made in quantifying the extent of forest degradation during the last few years. The process of developing the first results report, studies conducted and presented in the second and third results reports, and their subsequent verification by DNV GL, revealed a need for adjustments in measuring methods, and adjusted application of, some of the indicators due, *inter alia*, to unforeseen effects of their very conservative design.

Loss of intact forest landscapes

*The reduction of compensation on the basis of this indicator equals 853 275 USD.*

The reduction in IFL area from the previous reporting period of the partnership equals 155 hectares. Following the JCN, reduction of the area that meets the IFL criteria is accounted as deforestation with full carbon loss.

Guyana and Norway have agreed that this indicator might be phased out in the future, in parallel with a process initiated by Guyana to ensure more permanent status of varying degrees of protection to significant amounts of the IFL areas.

#### Emission as indirect effect of new infrastructure

*No reduction is made on the basis of this indicator.*

The area affected by degradation under this indicator has been verified at 3587 hectares for the fourth reporting period. For the second reporting year, Guyana made use of a new and significantly improved method for mapping infrastructure related degradation. A historical proxy analysis of areas affected by degradation from infrastructure was conducted for the period 2000-2010. The total area of a 100m buffer surrounding all new infrastructure was calculated for the historical period, as well as for the second year period. This analysis indicated that the area affected by new infrastructure in the second reporting year was comparable to the historical period.

It was agreed that as a benchmark for infrastructure related degradation in future reporting periods, the area mapped as degraded in the second reporting period would be used. This area equaled 5460 hectares, but as the second reporting period had a length of 15 months, and subsequent reporting periods are 12 months, this number was annualized. The established benchmark is therefore 4368 hectares.

As the result verified for the fourth reporting year (3587 hectares) is below the established benchmark of 4368 hectares, no reduction is made on the basis of this indicator.

#### Emissions from forest management

*No reduction is made on the basis of this indicator.*

3 106 693 tons of CO<sub>2</sub> are reported and verified for this indicator. This is below the baseline of 3 386 778 tons CO<sub>2</sub> (2003 – 2008 average).

#### Emissions from illegal logging activities

*No reduction is made on the basis of this indicator.*

In the historical reporting, the default level of 15% of harvested production was used to assess illegal harvest. The rate of illegal logging in the current reporting period is informed by a database that records infractions of illegal logging in Guyana in all areas.

The indicator shows a reduction in illegal logging activities as compared to the benchmark.

#### Emissions resulting from anthropogenic forest fires

*No reduction is made on the basis of this indicator.*

The reported and verified figure is below the estimated historical rates of anthropogenic forest fires.

#### **Value of “avoided emissions” after applying subtractions based on interim degradation indicators**

70 225 273 USD - 853 275 USD = 69 371 998 USD

#### **Step 4: Reducing the maximum amount of results based payment if deforestation is above 0.056%**

As described in the Joint Concept Note, the partners have agreed that for any deforestation rate above 0.056%, payment will be gradually reduced and eventually cease if the rate in any given year is above 0.1%.

As the deforestation level in the third reporting year has been reported and verified at 0,068 %, this mechanism will be triggered in calculating performance based payments for this period.

The discount factor resulting from applying the methodology described in the JCN equals 14 %. This discount equals 9 712 080USD. This amount will be subtracted from the 69 371 998USD resulting from Step 3, resulting in a sum of 59 659 918 USD.

#### **Step 5: Conclusion**

The maximum amount payable to the Guyana REDD Investment Fund (GRIF) based on the REDD+ Performance Indicators in the fourth reporting period is 59 659 918 USD. Guyana and Norway is in agreement that as there should be an incentive for other donors to join the partnership, Norway will not in any given year pay the full amount Guyana has “earned” according to this model. Moreover, Norway’s total support for the 2010-2015 period is limited upwards to 250 million USD (1.5 billion Norwegian kroners).

**On this basis, Norway will contribute 40 000 000 USD not exceeding the upper limit of 360 000 000 Norwegian Kroner, to Guyana based on Guyana's verified results for 2013.**