



# Accounting for Natural Disturbances

**JRC Workshop, Stresa, 2-3 May 2016**



## What ND do matter:

The ND provision is proven relevant for forest fires since those ND determine sudden emissions

For other disturbances the ND provision is likely relevant only if the DOM pool is not accounted for

- ND other than fire determine just a C stock transfer from a pool to another pool with long term decay (and often most of the C stock loss goes into salvage logging)
- avoided removals caused by the ND may be revised in the accounting through a technical correction



# Excluding emissions:

The BL:

- represents the amount of emissions under human control (and likely caused by)
- Is unlikely 0 (no forest fires caused by human?)
- Ensure no expectation of credits/debits when replaces actual fires emissions



## Accounting for subsequent removals:

Subsequent removals associated with ND should be compared to removals included in the FMRL so determining subtraction/addition to the accounted quantity.

This to avoid that ND provision result on expectation of debits/credits

Alternative approaches may include removals within the calculation of the BL, and therefore of the margin, if any, and of the net emissions to be input in the trigger test

# What does impair the calculation?

Trend in ND:

- If ND increase across time, IPCC default method gives expectation of net debits
- If ND decrease across time, IPCC default method gives expectation of net credits
- Lagged C stock changes:
- Differences in the time series length between BL and actual GHG estimates during the CP would result in a trend
  - likely increasing, if only emissions included
  - likely decreasing, if also removals included



# Emissions and subsequent removals that may be excluded do not include:

Prescribed burning

Salvage logging

Subsequent deforestation

Emissions and subsequent removals must be estimated from same lands and same C pools and GHG



## To apply ND, report in NIR of 2015:

intention to apply the provision to FM, AR or both

country-specific information on

- a FM background level (**BL**) *that has been included in FMRL*
- an AR BL
- how BL has been estimated (separately for FM and AR)
- how to avoid the expectation of net credits or net debits during the CP, including through the use of a margin, where a margin is needed (separately for FM and AR)



## To exclude emissions, demonstrate:

- all affected lands are identified and tracked, including their georeferenced location (*already done for burnt areas*)
- how annual emissions and the subsequent removals are estimated (*already done for forest fires and subsequent regrowth*)
- emissions associated with *salvage logging* not included in the ND provision (*not an issue if the gain&loss method is applied, either CO<sub>2</sub> emissions from burning need to be singled out from the stock-difference method*)
- no land-use change has occurred on lands for which the provisions are applied (*statistical approach allowed; avoided by law*)
- occurrences were beyond the control of, and not materially influenced by, the Party in the CP (*i.e. ND applied only in case of statistical outliers*)
- practicable efforts to prevent, manage or control the ND (*i.e. ND applied only in case of statistical outliers*)
- efforts taken to rehabilitate land where practicable (*current forest legislation in any country*)



# Reporting

**Reporting** for Natural Disturbance in the CRF tables is **required only for those Parties that apply the ND provision and only for the years in which the provision is applied**



## CRF tables: 4(KP-I)A.1 / 4(KP-I)B.1

These tables provide estimates of carbon stock changes and net CO<sub>2</sub> emissions and removals from AR/FM lands subject to natural disturbances

Quantities reported here are summed up in the Accounting CRF table for AR/FM

*(Net emissions/removals columns)*

Check if the total area reported in Column C, for land subject to natural disturbances, is the same as the total area reported in Column E in tables 4(KP-I)A.1.1 and 4(KP-I)B.1.3, respectively.



## CRF tables: 4(KP-I)A.1.1 - 4(KP-I)B.1.3

These tables provides the trigger test for the application of the ND provision, and calculates emissions and subsequent removals to be excluded from accounting

Quantities to be excluded calculated here appear in the CRF table on Accounting (*Net emissions/removals columns*)

Check if:

- ✓ The values of the background level and margin are the same as those reported in the NIR for AR and FM lands respectively?
- ✓ The disturbances reported in tables 4(KP-I)A.1.1 and 4(KP-I)B.1.3 are of the same type as those included in the BL and margin (if used), and calculated using consistent data, for AR and FM respectively
- ✓ Any recalculation of GHG emissions and/or removals from disturbances affect the trigger test
- ✓ Subsequent removals been excluded from land where emissions were excluded due to the application of the provision



## CRF tables: 4(KP-I)A.2

This table provides estimates of carbon stock changes and net CO<sub>2</sub> emissions and removals from D lands that have been subject to natural disturbances when previously reported under AR and FM

Quantities reported here are summed up in the Accounting CRF table

Check if in any year the new area added as D lands previously subject to ND correspond to the area removed in the same year from CRF tables 4(KP-I)A.1.1 and/or 4(KP-I)B.1.3



## CRF tables: **Accounting table**

Excluded emissions and subsequent removals due to natural disturbances from AR and FM lands as calculated in CRF tables 4(KP-I)A.1.1 and Table 4(KP-I)B.1.3 are accounted for in this table

## What if: **Disturbance type not selected**

- ✓ If emissions (and subsequent removals) from the type of disturbance to which you wish to apply the ND provision was not included in the FMRL (and therefore in the BL), their inclusion in the trigger calculation during the CP will not result in an expectation of credits.
- ✓ If emissions (and subsequent removals) from the type of disturbance to which you wish to apply the ND provision was included in the FMRL but not in the BL, their inclusion in the trigger calculation during the CP will result in an expectation of credits.

## What if: **Excluding legacy emissions from BL**

- ✓ It simplifies the calculation and removes the potential expectation of credits/debits associated with the inclusion of legacy emissions.
- ✓ It is ok if legacy emissions are consistently excluded also from the trigger test.
- ✓ In any case, legacy emissions must be included in the FMRL and in the actual GHG estimates during the CP



## What if: Including removals in: BL, margin and trigger

- ✓ Does not give expectation of credits/debits so far as a consistent transition period is applied to both, the BL and the CP estimates.
- ✓ Simplify reporting
- ✓ Deviates from the default method. However, if for removals the same statistical method as for (negative) emissions is applied, their treatment may be considered consistent with the default method



# Accounting for Harvested Wood Products

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## What HWP do matter:

HWP produced from wood harvested in forest land under KP

Either default categories: Wood panels, Sawn wood, Paper and paperboard

Or country-specific categories

Exported HWP:

- either in or out
- either according to default categories or to country-specific categories



## Excluding HWP:

All Imported

All discarded (through half-life values)

Fuelwood and other wood used as bioenergy

All HWP produced from wood originated from deforestation events

All HWP produced from wood originated in the 1<sup>st</sup> CP from ARD lands

All HWP produced from wood originated in the 1<sup>st</sup> CP from FM lands, if FM elected

Optionally, all HWP produced from wood originated from FM lands before the beginning of the 2<sup>nd</sup> CP if FMRL is a projected estimate.



## To apply HWP, report in NIR of 2015:

The treatment of the HWP produced with wood harvested in the 1<sup>st</sup> CP and that were already accounted for on the basis of instantaneous oxidation.

The treatment of the HWP produced before the 2<sup>nd</sup> CP that, in case of a projected FMRL only, may be excluded from the calculation of the HWP contribution.

The treatment of the HWP exported, that may also be tracked and associated emissions reported when they actually occur instead of assuming the entire HWP being instantaneously oxidized when exported.

The methodology applied to estimate the HWP contribution



# Reporting

CRF table 4(KP-I)C contains all the information on HWP

Total harvested quantity should be apportioned among the following five relevant categories:

- ✓ From land subject to AR
- ✓ From land subject to D
- ✓ From land subject to FM
- ✓ From Deforestation events
- ✓ From other lands (e.g. cropland)



# Reporting

Any country-specific method must be consistent with the production approach

Any country-specific method must calculate the HWP C stock at initial time ( $t_0$ ) at equilibrium (i.e. annual C stock loss = annual C stock gain).

*Note that in the case of a projected FMRL such steady-state condition may not be established if the Party decides to exclude all HWP produced before the first year of the 2<sup>nd</sup> CP, i.e.  $t_0 = 2013$ .*



## What if:

- ✓ HWP produced from wood originated from AR and D lands are reported together under AR (or D)

*no effect on accounting since both activities follow the same accounting rules*

- ✓ HWP originated from AR and/or D are reported together under FM:
  - Under AR and/or D, the HWP sink will not be reported so resulting in a conservative accounting.
  - Under FM:
    - In case of a projected FMRL, there is no impact on FM accounting if HWP resulting from AR and/or D are also included in the projected FMRL.
    - In case of a historical FMRL, or in case HWP resulting from AR and/or D are not included in the projected FMRL, the HWP net sink that would have been accounted for under AR and/or FM will be accounted for under FM, for an identical quantity, although subject to the FM cap.



## What if:

HWP produced from wood originated from land not subject to AR, D or FM are reported under FM:

- ✓ in case those non-forest HWP are also included in the FMRL (projected or historical), there will be:
  - No impact if the quantity accounted for during the CP does not differ from the quantity included in the FMRL.
  - Credits/debits if the 2 quantities are not equivalent (this issue may be addressed by the Party calculating a technical correction of the FMRL)
  
- ✓ In case those non-forest HWP are not included in the FMRL, there will be an impact on FM accounting since a net sink from HWP will be added to the 2<sup>nd</sup> CP accounting.



## What if:

HWP produced from wood originated during the 1<sup>st</sup> CP from land not subject to AR, D or FM, if elected, are not excluded from the calculation of the HWP contribution.

- ✓ in case of ARD and historical FMRL it results in additional emissions be accounted for (*it is therefore conservative*)
- ✓ In case those of projected FMRL no impact on accounting.