



Technical correction in the context of Forest Management Reference Level (FMRL)

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In the context of FMRL, **methodological consistency** refers to the need for consistency, during the CP, between the methodological elements used in the FMRL submission and those used in the reporting of FM, i.e.:

- (i) *Method* used for FMRL (models or elaboration of historical time series);
- (ii) *Historical data* used for FMRL, e.g. (forest area, harvest, increment, etc.);
- (iii) *Other elements* used for FMRL (pools/gases, HWP, ND, etc.).

A change in methodological elements used in the construction of FMRL triggers a methodological inconsistency → Technical Correction

At the time of FMRL setting



When reporting FM during CP2



← Technical Correction

By contrast, a deviation in policy assumptions from those assumed in constructing the FMRL does not represent a methodological inconsistency → no Technical Correction

CHECK LIST TO DETECT METHODOLOGICAL INCONSISTENCIES AND NEED FOR TC

Criteria		Action	
1 The method used for GHG reporting of FM or FL-FL changed after the adoption of FMRL		Calculate $FMRL_{corr}$ ensuring consistency between reported FM and FMRL	
2. Any of the following methodological elements used for FMRL (as reported in the FMRL submission) changed after adoption of FMRL			
Element	Addition /modification in GHG inventory		
a) Pools and gases	New pools or gases		
b) Area under FM	Recalculated historical data* on area		
c) Historical data for GHG inventory	Recalculated historical data* for FL-FL or FM.		
d) Forest characteristics and management	Recalculated historical data*		
e) Historical Harvesting rates	Recalculated historical data*		
f) Climate data assumed by models for projecting FMRL	Different observed climate data as compared to what assumed in FMRL		
g) Harvested wood products	New/recalculated data and/or methods		
i) Natural disturbances	New/recalculated data and/or method; inclusion of submitted (in 2015) or revised (later) background level and margin with assumptions different from FMRL		
3. Other possible methodological inconsistencies, e.g., the FMRL model's outputs are not capable of reproducing the historical data* reported for FM or FL-FL.			

* data for the time period used in the construction of the FMRL



Technical correction

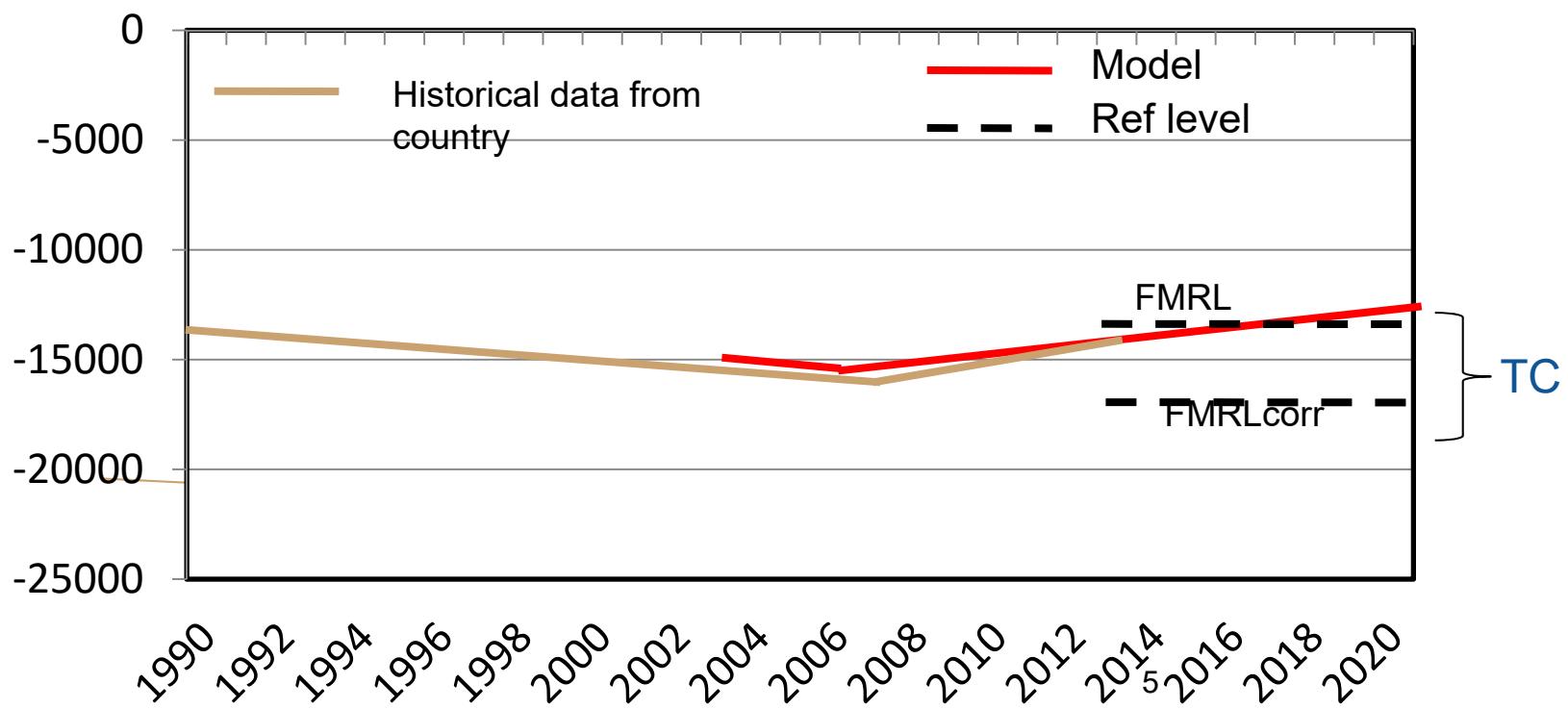
The Technical Correction (TC) is a net value of emissions /removals, which is added at the time of accounting to the original FMRL to ensure that accounted emissions / removals will not reflect the impact of methodological inconsistencies

$$\text{Technical Correction} = \text{FMRL}_{\text{corr}} - \text{FMRL}$$



If the need for a TC has been identified, but a new model run cannot be done, time-series consistency may be (*preliminary*) achieved by using one of the methods by 2006 IPCC GL, including the "overlap" between models results and data for the historical period (before the FMRL submission).

The overlap may also be used with NEW model results.





HOW TO PERFORM AND DOCUMENT THE CALCULATION OF FMRL_{corr}

Several methods possible, depending on the approach used for FMRL, the cause of the inconsistency and the data available.

In any case, it is *good practice* to provide information on the rationale for calculating FMRL_{corr} and the method used, and that the method used avoids the expectation of net credits / debits linked to any inconsistency between FMRL_{corr} and FM.

In the case of projected FMRLs, FMRL_{corr} may be calculated by a [new model-based projection](#) using new historical data. In this case it is *good practice* :

- *to keep all the policy assumptions of the FMRL submission unchanged;*
- *to show that the new model-based calculations used for FMRL_{corr} are capable of reproducing the data for FM (or FL-FL) for the historical period reported in the FMRL submission (i.e. period not affected by deviations from policy assumptions), or to provide any explanation if it is not the case.*



When to apply technical correction

Technical Correction shall be applied when accounting.

Information on technical corrections shall be reported as part of the *annual GHG inventories and inventory reports*. To this aim, it is *good practice* for Parties to assess annually the need for TC, i.e. checking the criteria set in Table 2.7.1, and to report transparent information on this in the annual NIR.

Dec. 2/ CMP.8 specifies that *Parties shall include the FMRL submission and the corresponding technical assessment report as annexes to the initial report. Any technical corrections resulting from recommendations in the technical assessment report shall be reported in the inventory submission for the first year of the CP2*

Table 4(KP-I)B.1.1

Approach applied for FMRL ⁽¹⁾	Value inscribed in the Appendix to the annex to decision 2/CMP.7 ⁽²⁾	
	(kt CO ₂ eq/yr)	
Drop-down list		
Business-as-usual projection		
Base year		
Zero at 1 January 2013		



Additional considerations on technical corrections

For projected FMRLs, it is *good practice*:

- **To provide information on main factors generating the Accounted Quantity** (FM - FMRL), e.g., that a higher (or lower) sink during the CP as compared to what assumed in the BAU FMRL is quantitatively consistent with the observed lower (or higher) harvest rate, and/or to provide evidence of other major factors involved
- To show that **model results used for FMRL reproduce the data for FM (or FL-FL) for the historical period** reported in the FMRL submission (i.e. period not affected by deviations from policy assumptions under BAU).
- **Pool consistency:** once a pool has been included in the FMRL, for consistency reasons this pool is required to be reported/ accounted also during the CP, irrespective of the pool being a sink or a source.



Case studies

Case 1

A Party has used old growth functions to project its FMRL, while actual emissions and removals during the 2nd CP have been reported using new NFI data on increment (new increment data are higher than previous ones). The Party has elected to account for FM annually and has not applied a technical correction for this issue.

You are reviewing an accounting year; what is your assessment?

You will ask the country to submit a technical correction of the FMRL, and to demonstrate that the model applied is able to estimate correctly the historical time series of biomass gains. If the Party does not submit a revised technical correction within the 6 weeks, you will proceed with an adjustment.



Question 1

The FMRL value calculated according with provisions contained in decision 2/CMP.6 can be substituted with a new value only if the Party's treatment of HWP and ND at time of submission of the FMRL was not consistent the rules subsequently agreed in decision 2/CMP.7.

True or False?

False. The FMRL can never be substituted. In cases of methodological inconsistencies, a technical correction would be added to the FMRL

Question 2

Because the assumptions applied in the construction of the projected FMRL are not part of the review, a Party needs not to provide information on the major factors generating the accounted quantity under FM.

True or False?

False. It is good practice to provide information on the major factors generating the accounted quantity under FM



A Party has calculated a projected FMRL and applies a narrow definition for FM which determines that, although no recalculation of FM area is occurred, the area under FM reported during the 2nd CP is larger than the area expected for the 2nd CP in the projected FMRL.

- a. The Party has to apply a technical correction to the FMRL since the area is one of the elements for ensuring consistency between the FMRL and the reporting of FM in the 2nd CP.
- b. The Party may apply a technical correction to the FMRL since area is one of the elements for ensuring consistency between FMRL and the reporting of FM in the 2nd CP.
- c. The Party has to apply a technical correction to the FMRL since area is one of the elements for ensuring consistency between FMRL and reporting in the 2nd CP, only if it does not result in accounting for additional credits (conservative approach).
- d. The Party cannot apply a technical correction to the FMRL since historical data on area subject to FM did not change.



Thank you!



EXAMPLES OF CASES WHICH MAY LEAD TO METHODOLOGICAL INCONSISTENCY BETWEEN FMRL AND REPORTING OF FM DURING THE 2ND CP

Case 1:

At the time of FMRL submission:

- The GHG inventory used a *Stock-Difference* or *Gain-Loss* (i.e. not a model)
- The FMRL was constructed using model X

Can this country apply a different method in GHG reporting during the 2nd CP?

Yes, but this will create a methodological inconsistency, which triggers a TC.

Can this country apply the model X in GHG reporting?

Yes, this will ensure consistency between the FMRL and FM.

Can this country apply a new model Y in GHG reporting?

Yes, but this will create a methodological inconsistency, which requires a TC. In this case, a possible way to address the inconsistency is using the new model Y also for calculating the FMRL_{corr} as part of the TC process.



EXAMPLES OF CASES WHICH MAY LEAD TO METHODOLOGICAL INCONSISTENCY BETWEEN FMRL AND REPORTING OF FM DURING THE 2ND CP

Case 2:

At the time of FMRL submission:

- The GHG inventory used model X
- FMRL was constructed using model X

Can this country use a new model Y (or new version of model X) in GHG reporting?

Yes, this will create a methodological inconsistency, which may be addressed by using the new model Y (or new version of the model X) also for calculating the FMRLcorr as part of a TC process.



Examples of cases which may lead to methodological inconsistency between FMRL and reporting of FM during the 2nd CP

Case 3:

At the time of FMRL submission:

- The GHG inventory used data from NFIIs representing the years 1995 and 2005
- FMRL was modelled using historical input data for the period 2000-2009, where 2000-2005 were based on the two NFIIs and 2006-2009 were extrapolated using existing NFI-data.

In the year 2012, a new NFI was finalized resulting in a recalculation of data for the period 2006-2009. This triggers a recalculation of the GHG inventory, and consequently a TC has to be applied. The new time series for 2000-2009 including historical data for 2000-2005 and recalculated historical data for 2006-2009 are used for calculating the FMRLcorr. Only data representing the same years as the data used to calculate the initial FMRL shall be used to calculate the FMRLcorr.