

Option B

A land-based approach for accounting anthropogenic greenhouse gases emissions by sources and removals by sinks in the LULUCF sector

which ensures the environmental integrity of the Kyoto Protocol while addressing different national circumstances

Environmental integrity

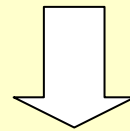
To achieve

- **real and deep cuts** of GHG net emissions

According to IPCC a **25 – 40% decrease** in net emissions by developed countries is needed

- **stabilization** of GHG in the atmosphere

at a level which limits the temperature increase to **2°C**



whole mitigation potential accountable and included in target setting

ALL mitigation actions rewarded

ALL actions causing increases in net emissions penalized

Definitions

Net emissions = aggregate emissions and removals

> 0, if magnitude of emissions > removals

< 0, if magnitude of removals > emissions

Reference level = an assigned amount of allowed net emissions (equivalent to base year net emissions in other sectors) used for calculating credits/debits:

the reference level be subtracted from the net emissions accounted during the commitment period

Expected level of net emissions during the commitment period = net emissions for the commitment period under a BAU scenario

Option B fundamentals

-Land-based accounting (IPCC land categories) of each relevant source and sink (no cherry picking, no backdoors)

-Crediting/Debiting of net emissions during the commitment period as a deviation from a reference level (additionality, as for all other sectors)

- Impact on compliance of natural disturbances addressed by comparing accounted net emissions against an expected level (carry over provision proposed)

- Conservativeness in accounting (to reduce probability of overestimation in crediting and underestimation in debiting)

Land based accounting

Data *ARE* available

Since 2005

Annex I Parties submit a complete timeseries (since 1990) of emissions and removals **to the UNFCCC, following IPCC land categories**

Some gaps in pools and/or categories still exist

but few are relevant

(if the trend does not indicate emission increases for that pool/category during the commitment period compared to the reference level the gap is not to be considered as relevant)

Mitigation potential

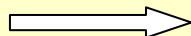
Aggregate Annex I Parties deviation from the RL during the CP			
	10%	30%	100%
	<i>expressed as Mt CO₂ yr⁻¹</i>		
as submitted	-164.7	-494.2	-1,647.5
gap-filled	-107.2	-321.5	-1,071.8
	<i>expressed as percent of the AA</i>		
as submitted	-0.9%	-2.7%	-8.9%
gap-filled	-0.6%	-1.7%	-5.8%
average 1990-2007 assumed as RL			

Land data from FAOSTAT

Emission factors = average reported values of AI Parties

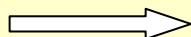
Reference level

Reference period
(instead of a base year)



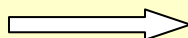
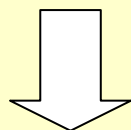
reduced impact of inter-annual variability

**Reference period =
Commitment period**



factor out natural and indirect effects;

**Reference level =
net emissions expected
according to national
BAU scenarios for the
commitment period**



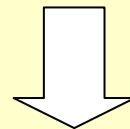
addresses different national circumstances

- Mitigation offsets result only if additional actions, compared to BAU, are implemented
- Magnitude of offset is directly proportional to the effectiveness of implemented actions

Natural disturbances

In the LULUCF sector

- Net emissions may occur **regardless of human intervention**
- **Natural disturbances** can cause sudden and rapid net emissions whereas re-establishment of C stocks is a slow process (“slow-in / fast-out”)



Net emissions from a natural disturbance affect compliance since **the commitment period is not long enough to allow forest re-growth**

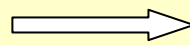
Natural disturbances

Option B deals with natural disturbances by:

Establishment of an expected level of net emissions during the commitment period

Based on this...

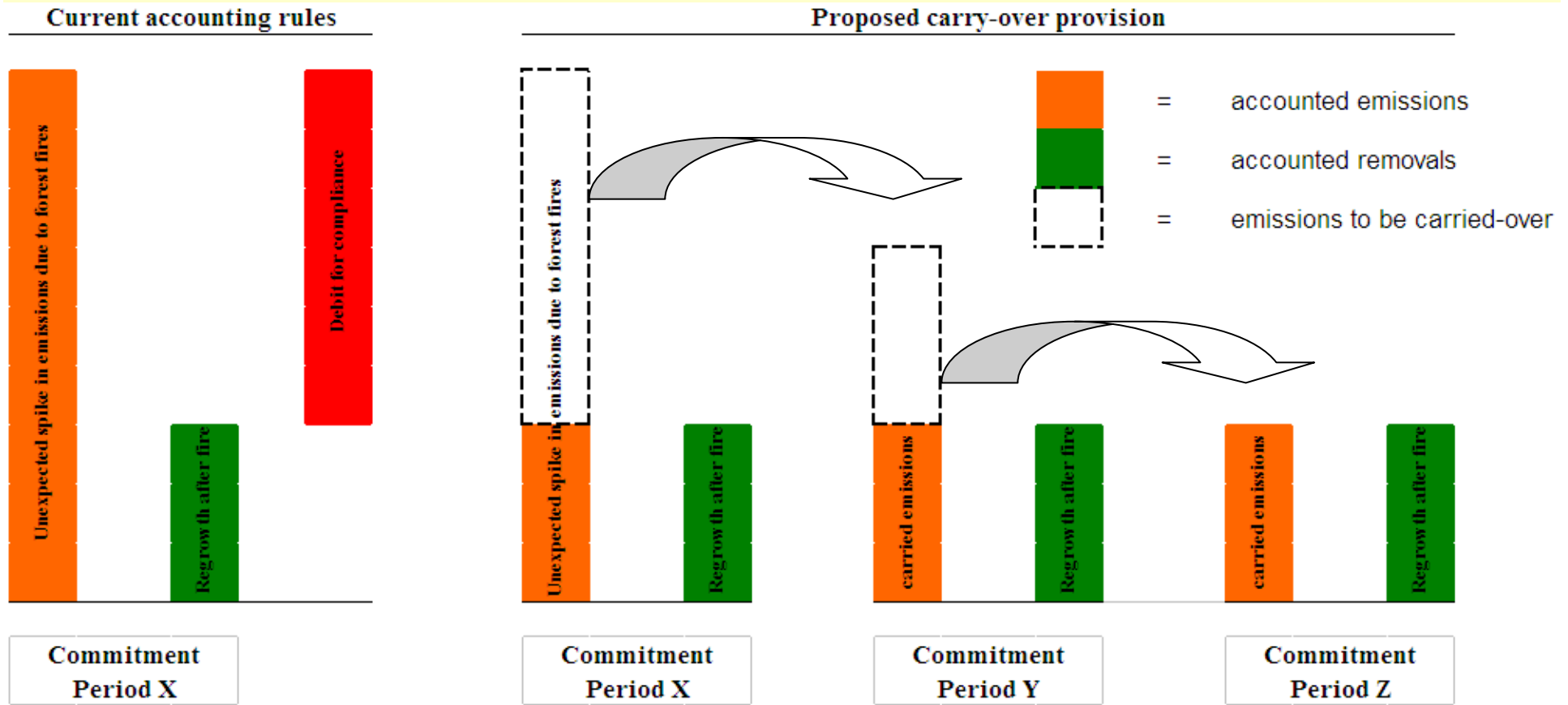
Net emissions over such expected level are likely due to unexpected natural disturbances



additional time (**carry over**) may be given to the country to offset the resulting debit

The possibility of “carrying over” to the next commitment period those debits deriving from unexpected natural disturbances avoids unbalances in compliance due to the slow processes of C recovery

Dealing with Natural disturbances



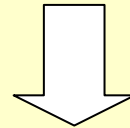
In practice, synchrony between emissions and removals is artificially set by means of a carry over provision to avoid unbalances in compliance

Conservativeness

Allows to keep

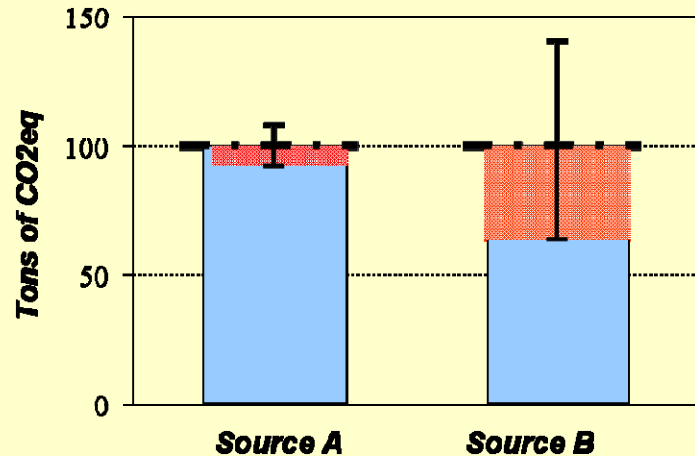
- **Potential over-estimation of net emissions reductions**
and
- **Potential under-estimation of net emission increases**

within a pre-defined acceptable level



Ensures full comparability among sectors

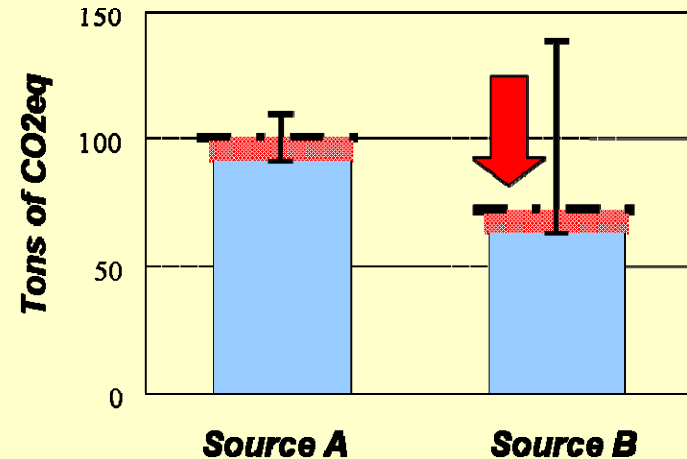
Conservativeness in practice



Estimated values of emissions reductions for sources A and B.

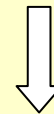
I = estimates' uncertainty
■ = potential over-estimation
(negative uncertainty)

The same *value* is *reported* for A and B but with greatly different uncertainties.



Conservative re-calculation of estimate for source B:

B's negative uncertainty = A's negative uncertainty



The accounted value of source B is moved downwards

Conservativeness

implementation

Currently

- implemented in the adjustment procedure of the KP
 - A “**punitive**” **instrument** applied by reviewers to the values reported by Parties.
 - To a certain extent its application is **subject to individual judgment**

Proposal

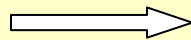
- include it in the accounting routine
 - Conservative values directly calculated by Parties, making it an **objective instrument which would provide incentives to improving accuracy of estimates**

NB: No changes to IPCC guidelines required

Further elements

Displacement of emissions

Incomplete accounting
(of the national area)



reduced emissions accounted for a category/activity result from mere displacement of the emissions
(artificial decrease in emissions!)

Wood biomass can be used for reducing emissions in the energy sector without having to pay for consequent decreases in C stocks

Our submission

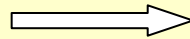
new paragraph in section “E. General” of Decision 16/CMP.1 on displacement of emissions from forest land (18bis) and on other lands (18ter):

Account for emissions in land excluded from the accounting and which could be **consequence of reduction in emissions reported under another accounted category**

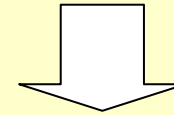
Further elements

Capping the LULUCF sector

Incomplete accounting
(of sources)



exclusion of anthropogenic sources of emissions and no reference level for calculating credits
(artificially low net emissions!)



Issuance of largely undue LULUCF credits, then used to offset excess of emissions in other sectors!

Our submission

text provided for new paragraph 21 *ter deces* in section “E. General” of Decision 16/CMP.1

Addition to the Party’s Assigned Amount from LULUCF sector cannot exceed an established threshold