

Structure of the Avoided Deforestation Partners Modules

The modules cover three REDD project types:

- Planned Deforestation
- Unplanned Deforestation
- Degradation through removal of fuelwood/charcoal

The following table which is in the framework document defines when modules are mandatory, optional or not applicable

List of modules/tools and determination of when module/tool use is mandatory or optional

		Unplanned Deforestation	Planned Deforestation	Degradation (Fuel Wood / Charcoal)
Always Mandatory	REDD-MF	M	M	M
	M-EXP	M	M	M
	T-ADD	M	M	M
	T-BAR	M	M	M
	X-UNC	M	M	M
	X-STR	M	M	M
Baselines	BL-UP	M	-	-
	BL-PL	-	M	-
	BL-DFW	-	-	M
Leakage	LK-ASU	M	-	-
	LK-ASP	-	M	-
	LK-DFW	-	-	M
	LK-ME	(m) ¹	(m) ¹	(m) ²
Pools*	CP-AB	M	M	M
	CP-D	(m) ³	(m) ³	(m) ³
	CP-L	O	O	O
	CP-S	O	O	O
	CP-W	(m) ¹	(m) ¹	-
Emissions*	E-BB	M	M	M
	E-FCC	O	O	O
	E-NA	O	O	O

M Modules marked with an M are fully mandatory, the indicated modules and tools must be used

O Modules marked with an O are fully optional, the indicated pools and sources can be included or excluded as decided by the project but if included in the baseline they must also be included in the with-project scenario

(m)¹ Mandatory where the process of deforestation involves timber harvesting for commercial markets

(m)² Mandatory where fuel wood or charcoal is harvested for commercial markets

(m)³ Mandatory if greater in baseline (post-deforestation/degradation) than project scenario and significant, otherwise can be conservatively omitted

* The tool **T-SIG** should be used to justify the omission of carbon pools and emission sources

REDD-MF - Framework document

The framework document serves as the top of the module structure bringing together the key elements from baseline, leakage and with-project calculations

Output VCU_t (number of voluntary carbon units at time t)

Inputs to calculations:

Buffer BRR - Number of buffer units withheld (from VCS tool)

Uncertainty From X-UNC

WITH-PROJECT (ex-post) ΔC_p calculated from M-EXP

BASELINE ΔC_{BSL} calculated from:

$\Delta C_{BSL, \text{planned}}$ from BL-PL
 $\Delta C_{BSL, \text{unplanned}}$ from BL-UP
 $\Delta C_{BSL, \text{degrade-FW/C}}$ from BL-DFW

LEAKAGE ΔC_{LK} calculated from:

$\Delta C_{LK-AS, \text{planned}}$ from LK-ASP (activity shifting)
 $\Delta C_{LK-AS, \text{unplanned}}$ from LK-ASU (activity shifting)
 $\Delta C_{LK-AS, \text{degrade-FW/C}}$ from LK-DFW (activity shifting)
 ΔC_{LK-ME} from LK-ME (market effects)

M-EXP - Ex-post monitoring

The ex-post monitoring module serves as the with-project module estimating emissions /removals from deforestation, degradation and carbon stock enhancement in the with-project case

Output ΔC_p

Inputs to calculations:

Ex-post deforestation $\Delta C_{p, \text{DefPA}, i, t}$

Module calculates area. Carbon stocks from CP-AB, CP-D, CP-L, CP-S, CP-W

Ex-post degradation $\Delta C_{p, \text{Deg}, i, t}$

Module calculates area and carbon stock change. Where degradation is through fire, emissions calculated using E-BB

Ex-post carbon stock gains $\Delta C_{p, \text{Enh}, i, t}$

Note that enhancement is only possible in areas projected to be deforested in the baseline. In the baseline these areas would have no forest but in the project case the forest continues to sequester carbon, this additional carbon is tracked here.

Area is derived from **BL-PL** and/or **BL-UP**. Carbon stocks from **CP-AB**, **CP-D**, **CP-L**, **CP-S**

Ex-post greenhouse gas emissions $GHG_{p,E,i,t}$

Fossil fuel combustion from **E-FCC**, biomass burning from **E-BB** and fertilizer emissions from **E-NA**

BL-PL, BL-UP and BL-DFW - **Baselines**

The three baseline modules calculate baseline stocks and emissions for the fixed 10 year baseline periods

Use

X-STR for stratification

T-SIG for significance testing

Planned deforestation

BL-PL

Output $\Delta C_{BSL,planned}$

Inputs to calculations:

Module assesses area and rate. Carbon stocks from **CP-AB**, **CP-D**, **CP-L**, **CP-S** and **CP-W**

Emissions from **E-BB**, **E-FCC** and **E-NA**

Unplanned deforestation

BL-UP

Output $\Delta C_{BSL,unplanned}$

Inputs to calculations:

Module assesses annual rate of deforestation. Carbon stocks from **CP-AB**, **CP-D**, **CP-L**, **CP-S** and **CP-W**.

Emissions from **E-BB**, **E-FCC** and **E-NA**

Degradation (fuelwood/charcoal)

BL-DFW

Output $\Delta C_{BSL,degrade-FW/C}$

Inputs to calculations:

Module calculates baseline volumes extracted and associated emissions

LK-ASP, LK-ASU, LK-DFW and LK-ME - **Leakage**

The four leakage modules calculate activity shifting and market effects leakage for implemented projects

Planned deforestation activity shifting

LK-ASP

Output $\Delta C_{LK-AS,planned}$

Inputs to calculations:

Module calculates leakage area (with reference to **BL-PL**). Carbon stock changes from **BL-PL**

Unplanned deforestation activity shifting

LK-ASU

Output

$\Delta C_{LK-AS,unplanned}$

Inputs to calculations:

Area of deforestation in leakage belt from **M-EXP**

Carbon stock changes in leakage belt from **M-EXP**

Activity shifting by immigrants (i.e. not captured by leakage belt) calculated by this module

Degradation (fuelwood/charcoal) activity shifting **LK-DFW**

Output

$\Delta C_{LK-AS,degrade-FW/C}$

Inputs to calculations:

Module calculates volume of fuelwood leakage and associated emissions

Market effects

LK-ME

Only for situations in which, in the baseline, timber or fuelwood would have been removed and sold at market in the process of deforestation

Output

ΔC_{LK-ME}

Inputs to calculations:

Relies on VCS defaults but draws from **BL-DFW**, **CP-AB**, **CP-D**, **CP-L**, **CP-S**, **CP-W**, **BL-PL** and **BL-UP**

Additionality

A modified CDM Additionality Tool, very closely related to the CDM tool, was created - **T-ADD**