environment, forestry & fisheries
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Environment, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

Box C.4. Annual decrease in Carbon stocks due to Wood removals in land remaining in the same land-use category.

Sheet Land Gain-Loss method in the MRV tool; column ΔC Living Biomass.

Sheet Supporting calculations

This example uses BEF and Wood density (D), instead of BCEF used in Box C.3.

Harvest volume – whole tree (m^3 yr^{-1}) = 500 m^3 yr^{-1} harvest. There is not fuelwood exploitation of tree parts, i.e. FG_{part} = 0.

BEF_R = 3.1 m^3 t^{-1}

Bark fraction = 0.13 (default)

Wood density = 0.354 t m^{-3} (*Pinus patula* Du Toit B. et al. (2016))

R = 0.28 (Du Toit B. et al. 2016)
CF = 0.47 (IPCC 2006)

Then, $L_{wood\text{-}removed}$ = 500 m^3 x 3.1 x (1 + 0.13) x 0.354 t m^{-3} x (1 + 0.28) x 0.47 = 373.01 t C

In the MRV tool, the Factor for conversion to C biomass loss 3.1 x (1 + 0.13) x 0.354 t m^{-3} x (1 + 0.28) x 0.47 = 0.75 (can be calculated in **Sheet Supporting calculations**); and the total Living Biomass LOSS (ABG+BGB, t C) is calculated in **Sheet Land Gain-Loss Method** as:

Living Biomass LOSS (ABG+BGB, t C) = 500 m^3 yr^{-1}x 0.75 = 373.01 t C

Continuing with the example forest from previous boxes: Therefore, the annual change in carbon stocks in biomass in the 10 ha is:

$\Delta C_B = \Delta G_G - \Delta G_L$ = 141.14 – 373.01 = **- 231.9 t C**