



## environment, forestry & fisheries

Department:  
Environment, Forestry and Fisheries  
REPUBLIC OF SOUTH AFRICA

- Forest management: “age category” indicates the number of years of the rotation. This should be  $\geq 21$  years for the first rotation and can be any value for the following rotations.
- Deforestation: “age category” indicates the age of the managed forest land deforested or the age of the afforested land deforested. The age information in the deforested lands is considered in the estimates of carbon stock change in DOM. Taxpayers should have a system for distinguishing between deforestation and temporary unplanted (TUP) land.

### Box C.1. Reporting of Afforested areas

In the facility AX32, 2 ha of grassland are afforested with *Pinus patula* in 2020, 4 ha in 2021 and 3 ha in 2022. The reported data in the reporting year 2022 should be:

Facility ID	Activity	Previous land use category	Species/Genus	Age Category	Area (ha)
AX32	Afforestation	Grassland	<i>Pinus patula</i>	1	3
AX32	Afforestation	Afforestation	<i>Pinus patula</i>	2	4
AX32	Afforestation	Afforestation	<i>Pinus patula</i>	3	2

### C.3.2. Annual Change in Plantation Carbon Stocks, $\Delta C$

There are two main methods for GHG estimates in the LULUCF sector as presented in 2006 IPCC Guidelines (IPCC, 2006):

- The Gain-Loss Method estimates the net balance based on the estimation of gains and losses separately for each individual reported year.
- The Stock-Difference Method is based on carbon stocks in relevant pools measured at two points in time to assess carbon stock changes.

In the MRV tool, both methods have been implemented for the estimates of carbon stock change in living biomass. However, the gain-loss method for DOM and SOC pools requires models that simulate DOM and SOC dynamics and these are not implemented in the MRV tool. Therefore, the estimates of DOM and SOC carbon stock change in the **Sheet Land Gain-loss method in the MRV tool** applies stock-difference method so that all carbon stock changes in all pools can be estimated in one single sheet of the MRV tool, regardless the method used for living biomass.

For transparency, the estimation method for DOM and SOM are explained in different sections of these methodological guidelines (see sections C.3.2.3 and C.3.2.4 below).

#### C.3.2.1. Living biomass pool: Gain-loss method

##### Sheet Land Gain-Loss Method in the MRV tool

The gain loss method, as presented in the 2006 IPCC guidelines, requires the biomass carbon loss to be subtracted from the biomass carbon gain<sup>18</sup>.

<sup>18</sup> For further explanation of the gain-loss method, refer to Volume 4, Chapter 2 of 2006 IPCC Guidelines.