In IPCC AR5, the residual sink is inferred as a difference between FF emissions + net land use – growth rate – ocean uptake, and thus matches the observed CO$_2$ growth rate by construction. In this method, a bias on net land use change is transferred to the inferred residual sink.

In NGHGI, the LULUCF C balance only covers direct management actions and does not match the CO$_2$ growth rate. Any difference with the CO$_2$ growth rate can be attributed to errors in NGHGI estimates and / or fluxes on unmanaged lands.

In DGVMs, net land use change includes a source corresponding to the loss of additional sink capacity (LASC). Some models include limited land management (wood harvest, crop harvest). Nonmodeled management from forestry, cropland and pasture management, conservation / restoration management, being in the grey area part of the orange box.

DGVMs have parameterizations and structural uncertainties, and their net land flux does not match the global CO$_2$ growth rate, leading to a global BIM (budget imbalance).