

**Extended Data Table 4 | Hypothetical absorption potentials of carbon stock restorations and indicative years until saturation at a current emission level of 9 PgC yr<sup>-1</sup>**

Restoration of	FRA-based	Pan-based	Years*	
	[PgC]	[PgC]	[yr]	[yr]
All C-stocks to 100% of potential	469	431	52	48
Cropland to 100% potential	129	131	14	15
Artificial pastures to 100% of potential	107	109	12	12
Cropland & artificial pastures to 30% of potential	60	61	7	7
Boreal forests to 100% of potential	10	9	1	1
Temperate forests to 100% of potential	17	16	2	2
Tropical forests to 100% of potential	119	76	13	8
All forests to 100% of potential	147	101	16	11
Boreal forests to 90% of potential	6	4	1	0
Temperate forests to 90% of potential	12	11	1	1
Tropical forests to 90% of potential	88	44	10	5
All forests to 90% of potential	106	59	12	7
Boreal forests to 80% of potential	2	0	0	0
Temperate forests to 80% of potential	7	6	1	1
Tropical forests to 80% of potential	57	11	6	1
All forests to 80% of potential	66	17	7	2
Other wooded land and savannas to 100% of potential	73	75	8	8
Other wooded land and savannas to 80% of potential	47	49	5	5

Note that a restoration to 100% of the potential probably entails a cessation of the respective land use, due to the intrinsic relations of harvest and carbon stocks<sup>25</sup>.

\*Years until saturation at current carbon emissions of 9 PgC yr<sup>-1</sup>.