

IPCC AR6 WG 11 on mitigation:

Page 7.4.2 line 28..."Among the mitigation options, the protection, improved management, and restoration of forests and 29 other ecosystems (wetlands, savannas and grasslands) have the largest potential to reduce emissions and/or sequester carbon at 7.3 (3.9–13.1) GtCO₂-eq yr⁻¹ (up to USD100 tCO₂-eq⁻¹ 30), with measures that 31 'protect' having the single highest total mitigation and mitigation densities (mitigation per area) in 32 AFOLU (Table 7.3, Figure 7.11)....."

7.4.2 lines 41-47 "Most mitigation options are available and ready to deploy. Emissions reductions can be unlocked 41 relatively quickly, ...The 42 protection of natural ecosystems, ... Avoiding the conversion of 44 carbon-rich primary peatlands, coastal wetlands and forests is particularly important as most carbon lost 45 from those ecosystems are irrecoverable through restoration by the 2050 timeline of achieving net zero 46 carbon emissions (Goldstein et al. 2020). ..."

7.5.3. Interaction between mitigation in the AFOLU sector and other SDGs in the 1 context of integrated assessments "...and the protection of high biodiversity ecosystems such as primary forests (SDG15) deliver high synergies with GHG abatement..."

IPCC AR6 WG 11 on Adaptation

"SPM.D.4 Safeguarding biodiversity and ecosystems is fundamental to climate resilient development, in light of the threats climate change poses to them and their roles in adaptation and mitigation (very high confidence).Recent analyses, drawing on a range of lines of evidence, suggest that maintaining the resilience of biodiversity and ecosystem services at a global scale depends on effective and equitable conservation of approximately 30% to 50% of Earth's land, freshwater and ocean areas, including currently near-natural ecosystems.

SPM.D.4.1 Building the resilience of biodiversity and supporting ecosystem integrity [50] can maintain benefits for people, including livelihoods, human health and well-being and the provision of food, fibre and water, as well as contributing to disaster risk reduction and climate change adaptation and mitigation.

SPM.D.4.2 Protecting and restoring ecosystems is essential for maintaining and enhancing the resilience of the biosphere (veryhigh confidence).Degradation and loss of ecosystems is also a cause of greenhouse gas emissions and is at increasing risk of being exacerbated by climate change impacts, including droughts and wildfire (high confidence).Climate resilient development avoids adaptation and mitigation measures that damage ecosystems (high confidence).Documented examples of adverse impacts of land-based measures intended as mitigation, when poorly implemented, include afforestation of grasslands, savannas and peatlands, and risks from bioenergy crops at large scale to water supply, food security and biodiversity.

page 35 footnote 50 (n.b. footnotes are formally approved): "Ecosystem integrity refers to the ability of ecosystems to maintain key ecological processes, recover from disturbance, and adapt to new conditions"