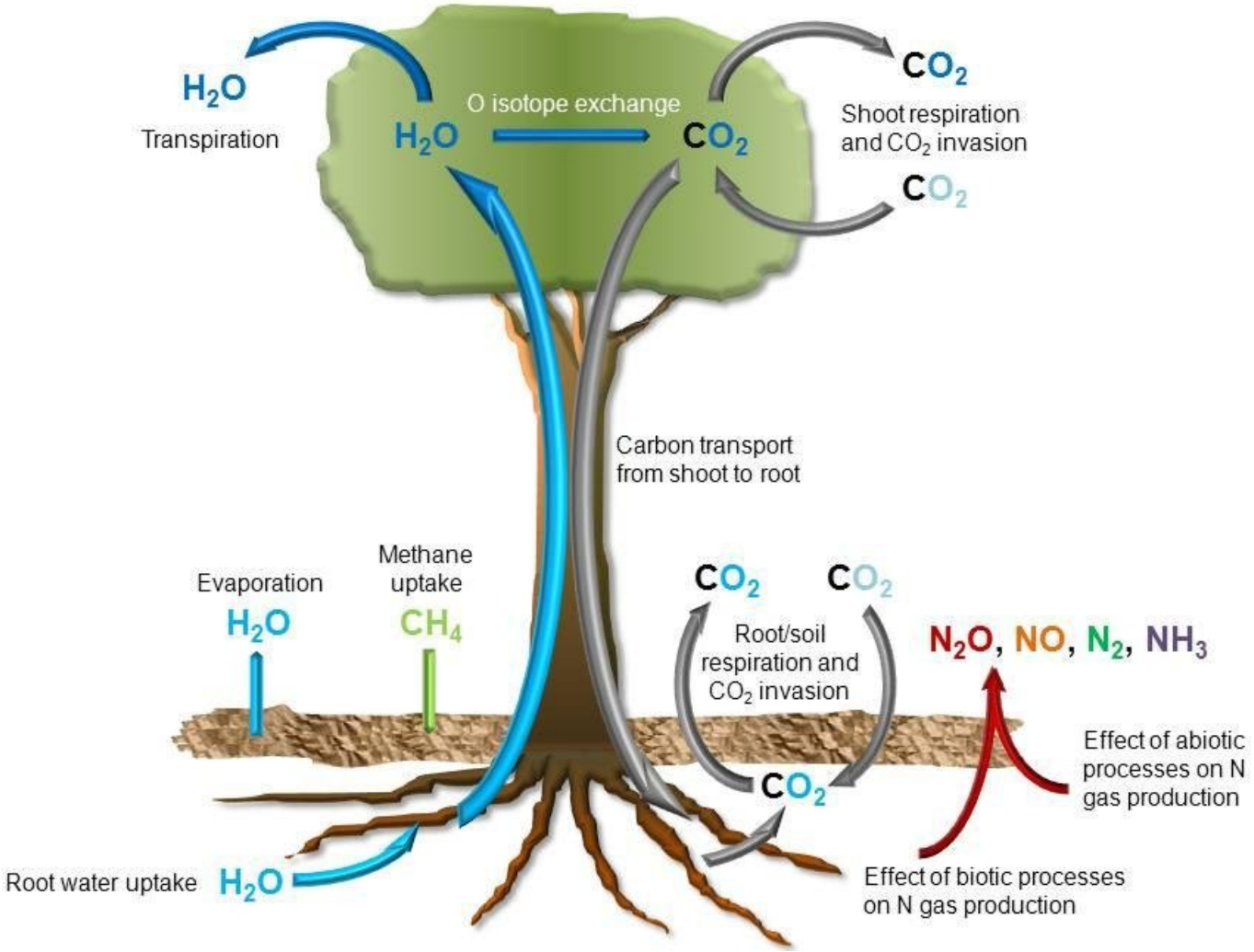
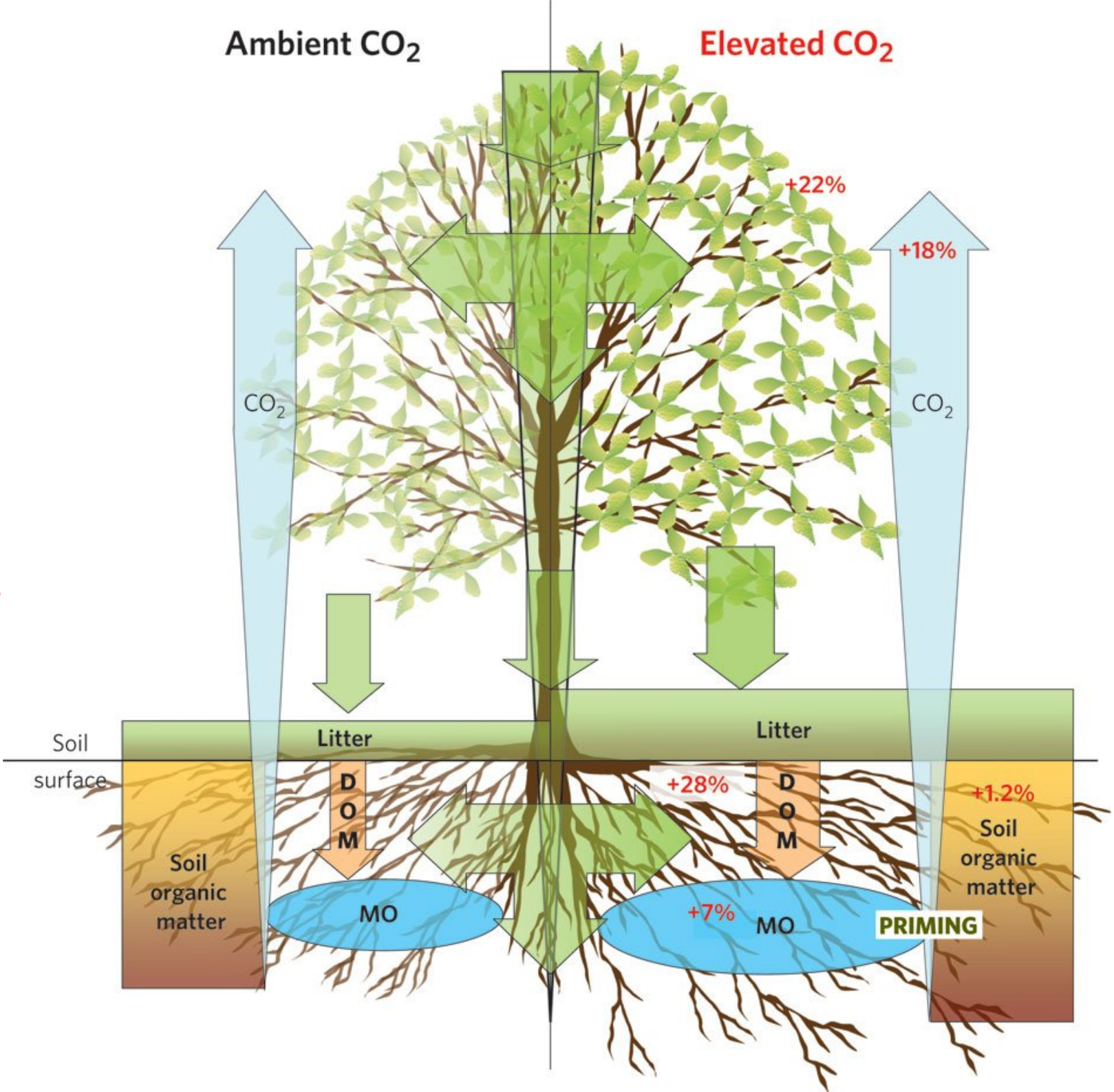
La atmósfera suelo



The impact of increased above- and below-ground plant litter input on carbon cycling.



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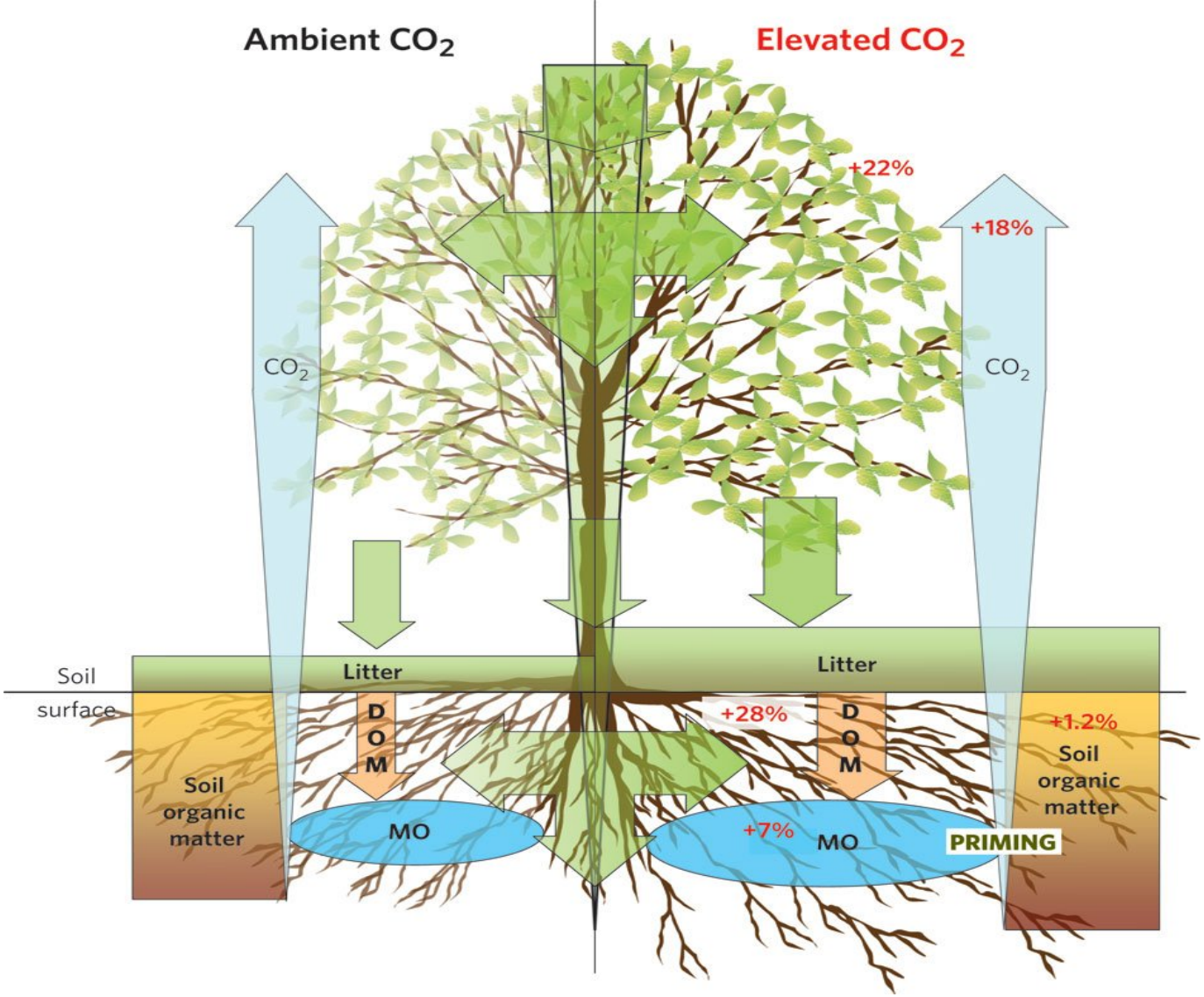

Increased CO2 concentrations boosts productivity, which increases the carbon input onto and into the soil (right). This increases the carbon being released back to the atmosphere in a positive feedback loop. Sayer et al. show that the addition of litterfall primes microorganisms (MO) for long-term acceleration of SOM decomposition5. The resulting CO2 release further challenges the assumption that tropical soils will act as carbon reservoirs as atmospheric concentration of CO2 increases. Average percentage effects of increased atmospheric CO2 concentrations (to between 430 and 750 ppm) in various ecosystems from experimental studies are presented in red2. The percentages refer to: above-ground biomass; root biomass; microbial carbon; soil carbon; and CO2 flux to the atmosphere from soil respiration. DOM, dissolved organic matter.