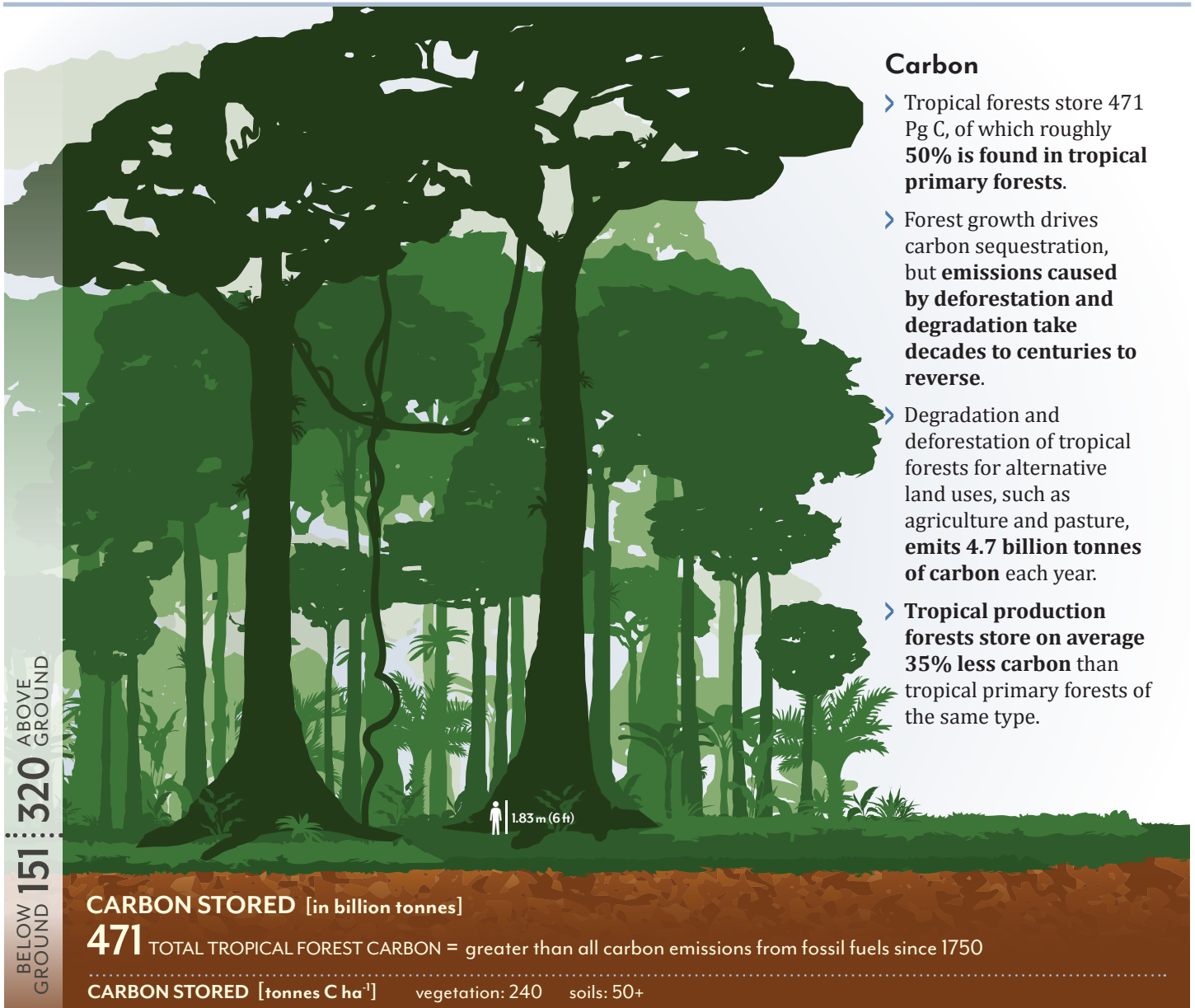


# PRIMARY TROPICAL FORESTS

ECOSYSTEM INTEGRITY OF PRIMARY TROPICAL FORESTS IS CRITICAL FOR BIODIVERSITY AND CARBON



Tropical forests are home to 541 Million hectares of remaining primary forest, or 46% of the global total

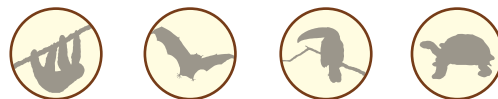
## Big, Old Trees

Big, old trees occur at low densities per hectare but are essential to the health of a primary tropical forest.

- > **Store up to half of the biomass carbon** in a forest.
- > **Live for centuries**, continuously accumulating carbon throughout their lifetimes.
- > **Provide essential habitat for biodiversity acting as ecological anchors** within the food and community webs that are the processes producing forest resilience.
- > **Create a stable forest interior environment** that is protected from extreme weather conditions.
- > **Big trees need to be protected**—they are quickly destroyed by logging but take centuries to regrow.

## Biodiversity

Native animals, plants, trees, fungi and microbes interact to create stable and enduring primary forests. Primary tropical forests are irreplaceable for biodiversity. They protect about two thirds of all terrestrial plant and animal species, many of which do not survive in degraded forests.



- > **Mammal, bird, reptile and insect seed dispersers and pollinators** ensure trees, including long-lived, hardwood species, “replant themselves” and renew the forest.
- > **Forest fauna and flora drive efficient nutrient and water cycles**, maintaining healthy forest growth.
- > **The closed forest canopy creates an interior microclimate** sheltering the understory and maintaining moist, shady and cool conditions.
- > **Water retained below the canopy** stimulates rapid and dense tree and other vegetation growth.
- > **The canopy transpires water, driving convection**, which in turn can generate regional cloud cover and rainfall.
- > **All of these attributes combine to create primary forest stability and resilience** to threats from diseases, invasive plants, feral animals, drought and fire.
- > **These attributes also enhance ecosystem adaptive capacity** to climate change and other stress.