

TROPICAL RAINFOREST

CARBON CYCLE

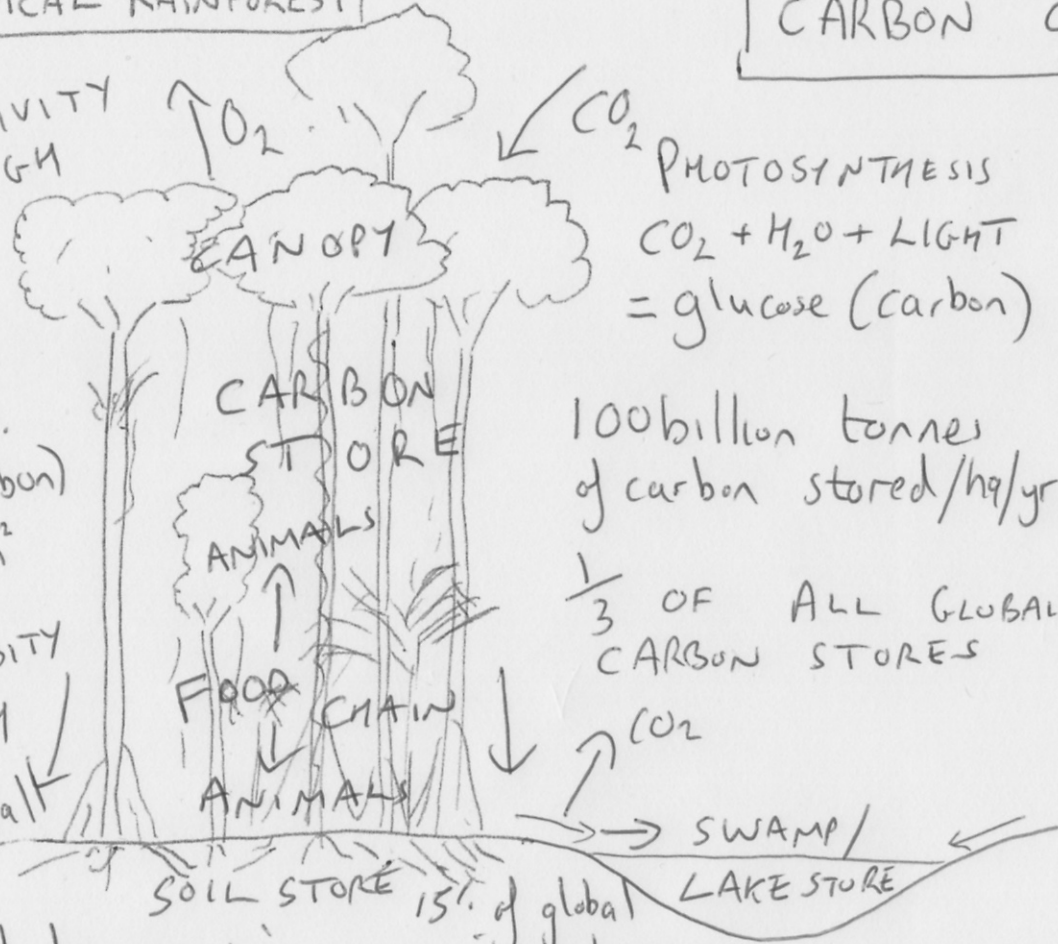
PRODUCTIVITY VERY HIGH  
 $2200 \text{ g/m}^2/\text{yr}$

BIOMASS VERY HIGH.  
 (stored carbon)  $45 \text{ kg/m}^2$

BIO DIVERSITY VERY HIGH  
 leaf fall

Rapid decomposition

- 85% stored in plants (flora)
- 15% stored in litter/soil
- < 1% stored in animals (fauna)



PHOTOSYNTHESIS  
 $\text{CO}_2 + \text{H}_2\text{O} + \text{LIGHT} = \text{glucose (carbon)}$

100 billion tonnes of carbon stored/ha/yr

1/3 OF ALL GLOBAL CARBON STORES

SOIL STORE 15% of global soil stores

PRODUCTIVITY OF PHOTOSYNTHESIS IS HIGH DUE TO:-

- Climate, hot, wet all year
- All year growing season
- Large leaf area.
- Canopy is the 'engine room'

MASSIVE SEQUESTRATION/SINK/STORE

- 1 tree stores 22.6 kg of Carbon a year
- 1 tonne per 25 yrs.

BUT DEFORESTATION has reduced rainforest carbon stores by 1/3 in the last  $\approx$  10 years.

NOW QUESTION? Are Rainforests a SINK OR SOURCE?