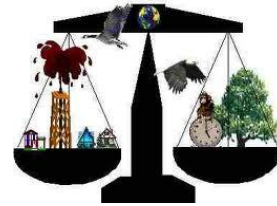


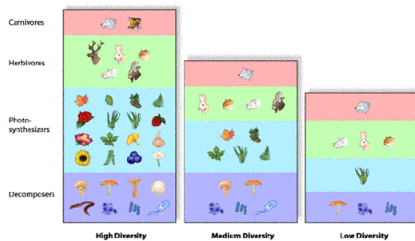
## BIODIVERSITY & SUSTAINABLE ECOSYSTEMS

### BIODIVERSITY & SUSTAINABLE ECOSYSTEMS

- ecosystems must maintain a type of balance
- this balance is known as EQUILIBRIUM



**BIODIVERSITY** is the number of various populations present at any ecological level



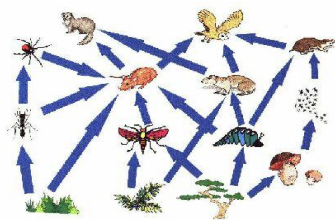
Low diversity= fewer populations  
High diversity=more populations

**SUSTAINABILITY** is meeting today's ecosystem needs without compromising tomorrow's ecosystems

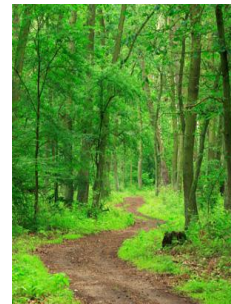


### WHY IS BIODIVERSITY IMPORTANT?

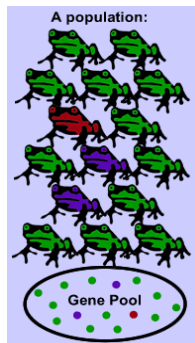
- Because more species means bigger food chains and bigger food webs.



More producers means that there will be more food for primary consumers which means more food for secondary consumers and also more oxygen.



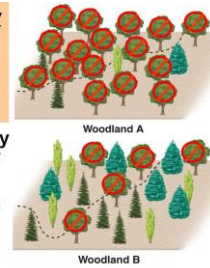
More species and room for adaptations creates bigger gene pools.



More ecosystems means more habitat

### Species diversity

S = species no.  
H = takes into account number of species and abundance of each



## POPULATION DYNAMICS

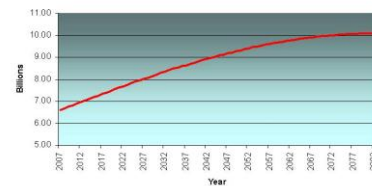


**NATALITY RATE:**  
Frequency of births in a population per capita

**MORTALITY RATE:**  
Frequency of deaths in a population per capita



Normal Population Growth



**CARRYING CAPACITY:** the maximum number of individuals that an ecosystem can support

## FACTORS THAT AFFECT A POPULATION

1. NATALITY RATE
2. MORTALITY RATE
3. HUNTING & PREDATION
4. STARVATION & ACCIDENTS
5. LOSS OF HABITAT
6. HUMAN DEVELOPMENT
7. WEATHER

