

ECOLOGY - FULL MIND MAP

Topic-wise | Hinglish | SSC / BPSC / BSSC / Railway

Topics in this chapter:

1. Ecology & Ecosystem - Core Terms
2. Ecosystem as an Open Functional System
3. Biosphere - Open/Closed System Debate & Scale

1. Ecology & Ecosystem - Core Terms

- Organism and environment - Ecology organisms ke aapsi relations aur organisms aur unke physical environment ke beech interactions ka scientific study hai. yeh term Greek oikos matlab 'ghar' aur logos matlab 'study' se bana hai. [Q1]
- ecosystem term ka pehli baar A. G. Tansley ne 1935 mein use kiya tha. unhone ecosystem ko 'physical systems ki ek khas category, jismein organism aur inorganic component relatively stable balance mein, khule ke roop mein aur different sizes aur types mein present hote hain' ke roop mein define kiya. ecosystem living organisms (plants, animals aur microbes) ka community hai, jo apne environment ke nonliving components (jaise air, water, minerals, soil aadi) ke saath ek system ke roop mein interaction karta hai. [Q2]

2. Ecosystem as an Open Functional System

- Galat kathan: It is a closed system.; ecosystem ek open system hai. [Q3]
- Abiotic materials, Producers, Consumers, Decomposers - ecosystem ke char basic component hote hain, jinmein abiotic substance, producer, consumer aur decomposer ya apachayak shamil hain. jabki producer, consumer aur decomposer ek widespread component 'biotic substance' ya 'biotic factor' mein shamil hote hain. [Q4]
- Galat kathan: It is a closed-system.; ecosystem living organisms ka ek community hai, jo apne environment ke nonliving components (jaise air, water aur minerals soil) ke saath milakar ek system ke roop mein interaction karta hai. Ecology ki important visheshataen hain: yeh aam taur par ek open system hai, jismein substance aur energy ka lagatar, lekin badalta aana aur loss hota rehta hai. [Q5]

3. Biosphere - Open/Closed System Debate & Scale

EXAM TRAP biosphere energy ke approach se open hai: solar energy Earth system mein enter karti hai aur heat bahar nikalati hai. substance ke approach se Earth ke biosphere ko aam taur par lagbhag ya material roop se closed mana jata hai, kyunki zyadatar substance andar hi chakrit hote hain aur bahut thodi amount hi bahar se ati ya bahar jati hai. kuchh Ecology granth antariksh ke saath hone wale alp substance-vinimay ke reason biosphere ko open system bhi kahate hain, jabki thermodynamic approach ise material roop se closed lekin energy ke liye open manata hai. isliye statement (A) system ki limit ki paribhasha par dependent karta hai aur reason (R) mein substance-vinimay ki bhasha bhi aspasht hai; isliye ekamatr nirvivad kut specified nahi hota. [Q6]

- biosphere Earth ke sabhi ecosystems ka global sum hai, isliye yeh Earth ka sabse bada ecological system hai. ismein atmosphere, hydrosphere aur lithosphere ke ve sabhi area shamil hain jahan life paya jata hai ya environment ke saath interaction karta hai. [Q7]