

ECOLOGICAL SUCCESSION



Volcanic eruption



Flood in Kedarnath, Uttarakhand 2013

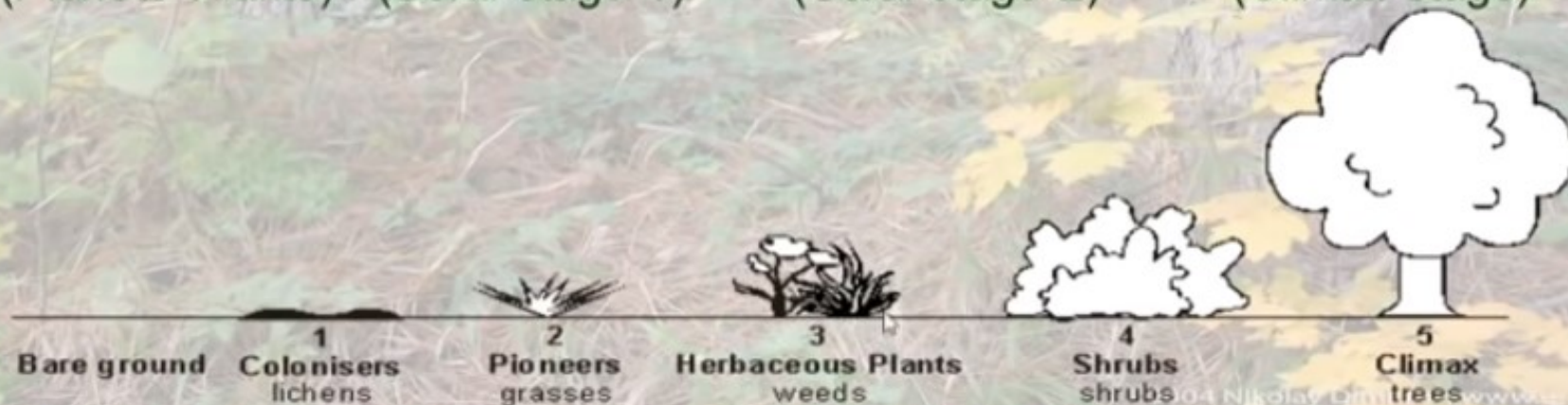


Cyclone Hudhud, Vishakhapatnam 2014

Definition of Ecological Succession

- The gradual replacement of one plant community by another through natural processes over time until stable community occupy that place.

Community A → Community B → Community C → Stabilized Community
(Pioneer Plants) (Seral stage 1) (Seral stage 2) (Climax stage)



TYPES OF SUCCESSION

NEHA GREEN
LEARNING FOR MAKING P

Primary Succession

- No soil
- Pioneer species
- Weathering & decomposition
- Humus and sand increase over time
- End = climax community



Secondary Succession

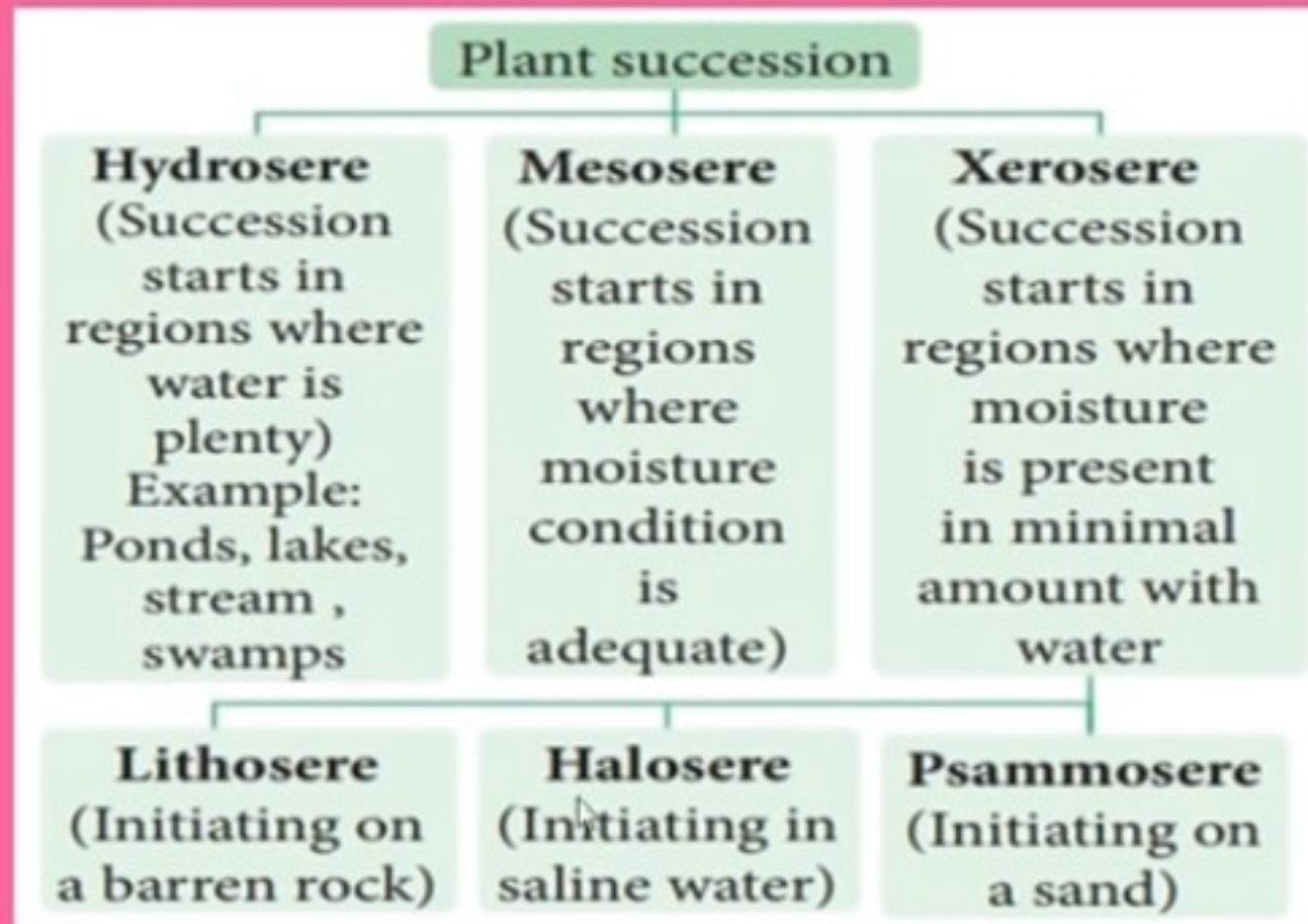
- Soil already exists
- Seeds have suitable soil conditions.
- Occurs much faster
- Climax community.



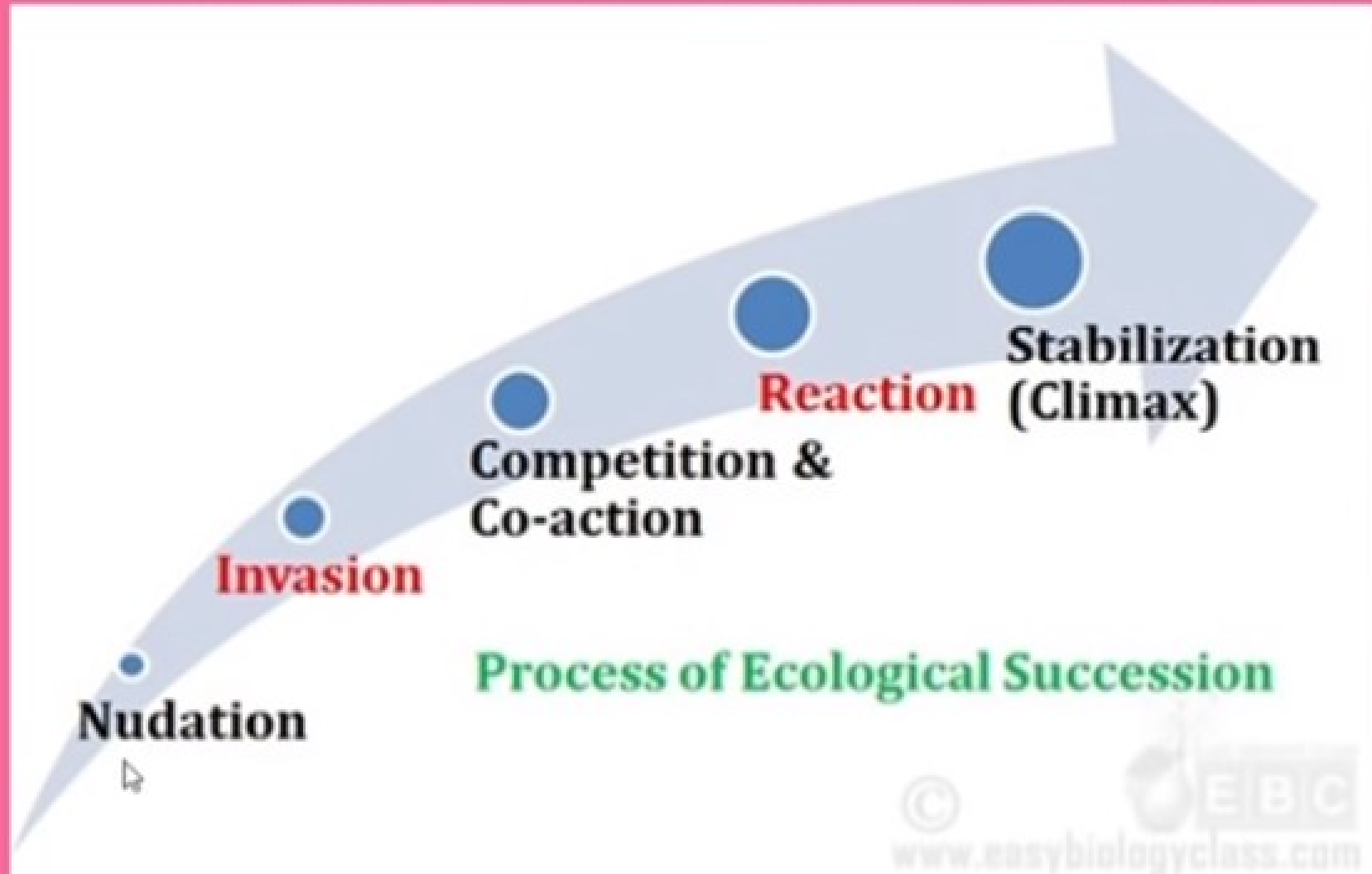
ECOLOGICAL SUCCESSION

Ecological succession is defined as an orderly process of changes in the community structure and function with time mediated through modifications in the physical environment and ultimately culminating in a stabilized ecosystem known as climax

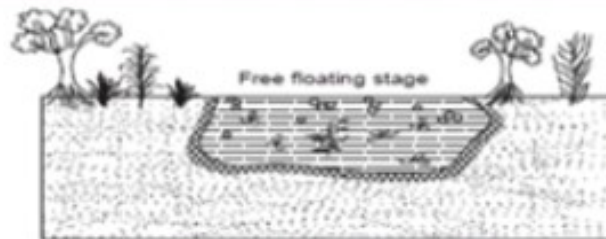
TYPES OF SUCCESSION



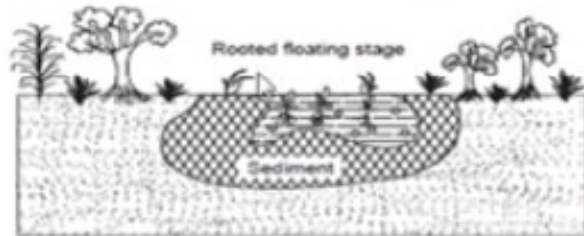
ECOLOGICAL SUCCESSION



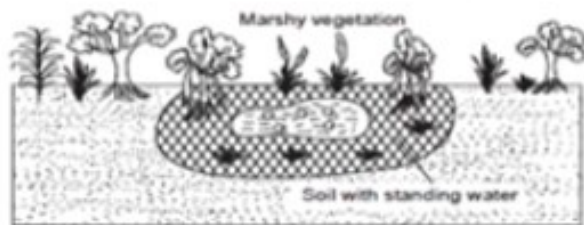
HYDROSERIE



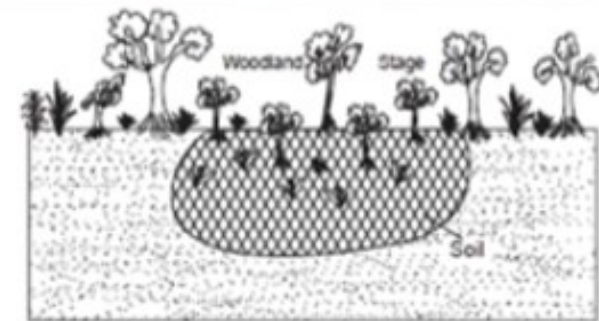
(a) Open water body (lake), sediment brought in by river.



(b) Sediment accumulation continues, organic debris from plants too add to soil formation and shrinking of water body occurs.

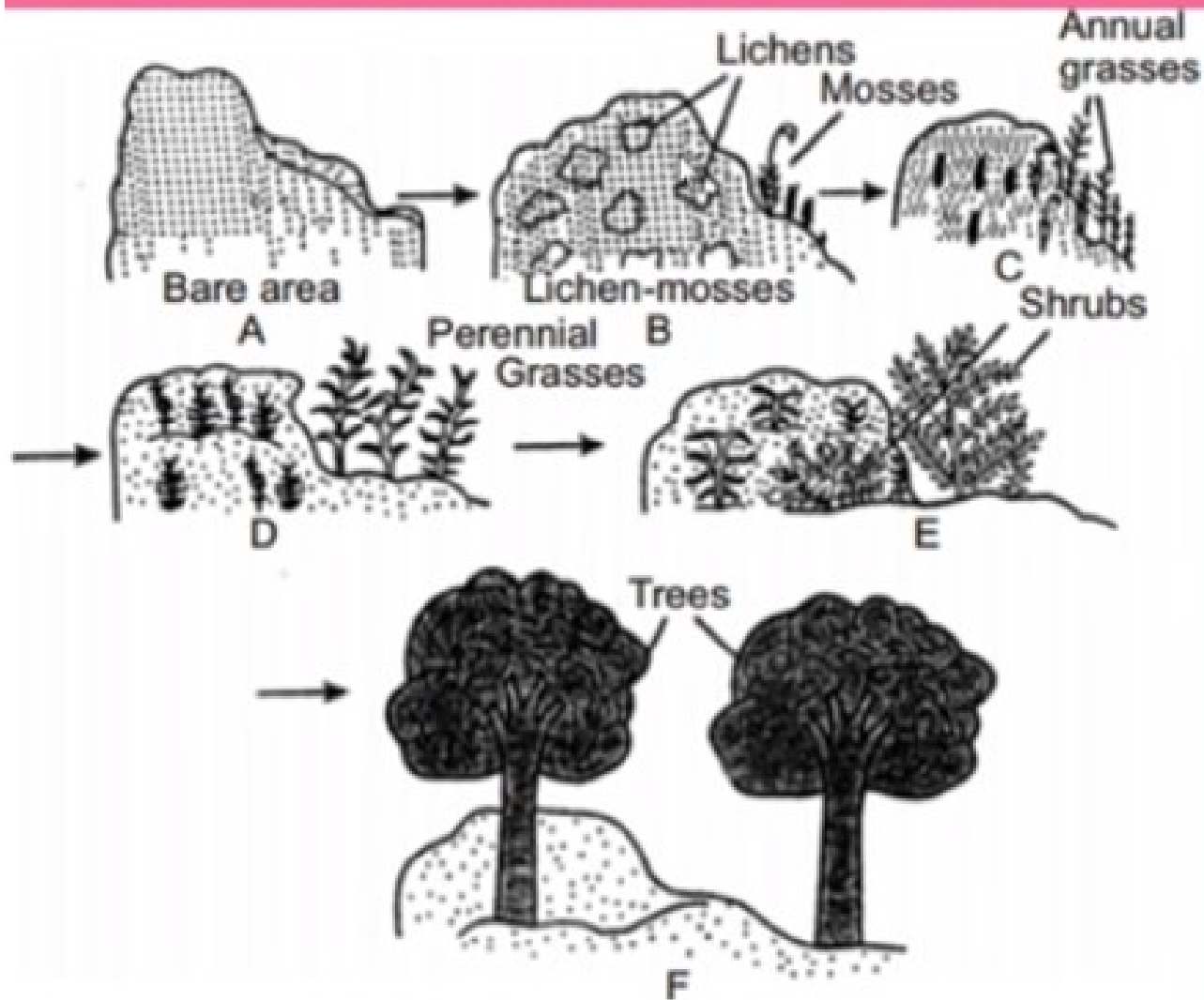


(c) A mat of vegetation covers the water which is mostly a marshy habitat now, with a small part as aquatic system.



(d) Eventually the former lake is covered by climax woodland community, representing a terrestrial ecosystem.

XEROSERE



Biotic succession on a bare rock

ECOSYSTEM SERVICES

ECOSYSTEM SERVICES

- The concept of ecosystem services gained recognition among policy makers when the United Nations published the “**Millennium Ecosystem Assessment**” (MA) in 2005.
- The study provided a comprehensive, global assessment of human impacts on ecosystems and their services, analysis of ecosystems condition and trend as well as possible solutions for restoration, maintenances and sustainable use.
- The key finding of the MA was that currently 60 per cent of the ecosystem services evaluated are being degraded or used unsustainably.

ECOSYSTEM SERVICES



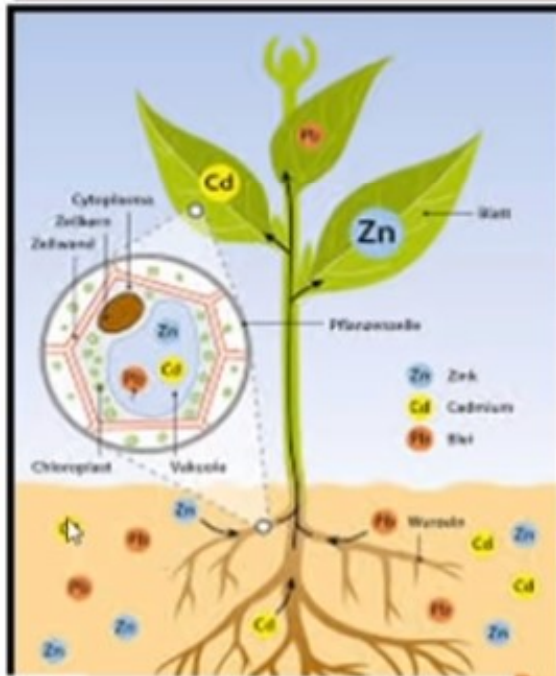
ECOSYSTEM RESTORATION

ECOSYSTEM RESTORATION



ECOSYSTEM RESTORATION

REMEDIATION



REHABILITATION



MITIGATION



THANK YOU