scenario suggests that the warming would be great near the poles. The resultant melting of polar ice might raise sea level by an estimated 109 m, gradually flooding areas 150 km (or more) inland from the current coastline. A warming trend would also alter the geographical distribution of precipitation, making major agricultural areas drier.

KEY POINTS

- **Ecology:** The branch of biology dealing with the relations and interactions between organisms and their environment, including other organisms.
- The movement of nutrients in the ecosystem is cyclic one. This flow of nutrients from environment to the organisms and back to the environment is called the biogeochemical cycle.
- When rain water falls, some of the water sinks or percolates into the ground and saturates the earth to a certain level. The top of the saturation zones is called water table. Whenever the Earth contains basin or channels, water will appear to the level of the water table. The water within the basin is called lakes and ponds and water within channels is called streams or rivers. Sometimes ground water is also located in underground rivers called aquifers.
- Decomposition of organic nitrogen compounds is the first source of soil nitrates. It occurs in two steps: (a) ammonification (b) nitrification
- The amino acids are converted into ammonia or ammonium ions. Production of ammonia or ammonium compounds in the decomposition of organic matter by microorganisms is called ammonification.
- Some ammonia escapes into the soil but much of it and ammonium ions are converted into nitrates by nitrifying bacteria. It is accomplished by two groups of nitrifying bacteria. the first group of bacteria e.g., Nitrosomonas converts ammonia to nitrates and the second group of bacteria e.g, Nitrobacter converts nitrites to nitrates. This process is called nitrification.
- The ultimate source of energy for our ecosystem is sun (solar energy). Only 1% of solar energy is incorporated into the ecosystem. The total amount of solar energy which is fixed by the producers during photosynthesis is called gross primary productivity (GPP).
- On the other hand the amount of energy that remains available for plants growth after subtracting the fraction that plants use for respiration is termed as Net primary productivity (NPP) or biomass.
- Earlier species are replaced by later species because the replaced species are better able to grow and reproduce under ecological succession. Individual successions are known as seres and the development phases are called seral stages.
- Primary succession is the change in species composition over time in a habitat that was not previously inhabited by organisms. Bare rock surface, such as recently formed volcanic lava and rock scraped clean by glaciers, are examples of sites where primary succession might occur.

substantially modified by a pre-existing community. Soil is already present at the sites. The common example of sites where secondary succession occurs are: (a) abandoned farm fields undergo secondary succession as they revert to forest (b) Succession in forest area where vegetation has been devastated by fire, flood, cyclone etc..

- Ecological succession which begins in pond, lakes, and marshes or elsewhere in water is termed as hydrarch and different stages are called hydrosers.
- Succession initiated on bare rocks, sand dunes, rocky slopes etc. where there is deficiency of water, and termed Xerarch different stages of development are collectively called xerosere.
- The energy source that has been used since ancient times is called conventional sources of energy. The examples of conventional energy sources are fossil fuels (coal, natural, gas, oil), firewood, and sources of energy i.e, electricity are coal, oil, wood, peat and uranium.
- Non-conventional energy sources or unusual sources of energy are the new sources of energy which are still not in common use. These are: solar power, hydro-electric power (dams in rivers), wind power, tidal power, ocean wave power, geothermal power (heat from deep under the ground), ocean thermal power (the different in heat between shallow and deep water), biomass (burning of vegetation to stop it producing methane), Bio-fuel (producing ethanol petroleum), from plants. Bio-gas. It is also known as renewable energy sources.