Age Distribution

Age distribution is the proportion of individuals belonging to different age groups in a population at a particular time. In ecology, it helps us understand the reproductive potential and future growth of a population.

Types of age distribution

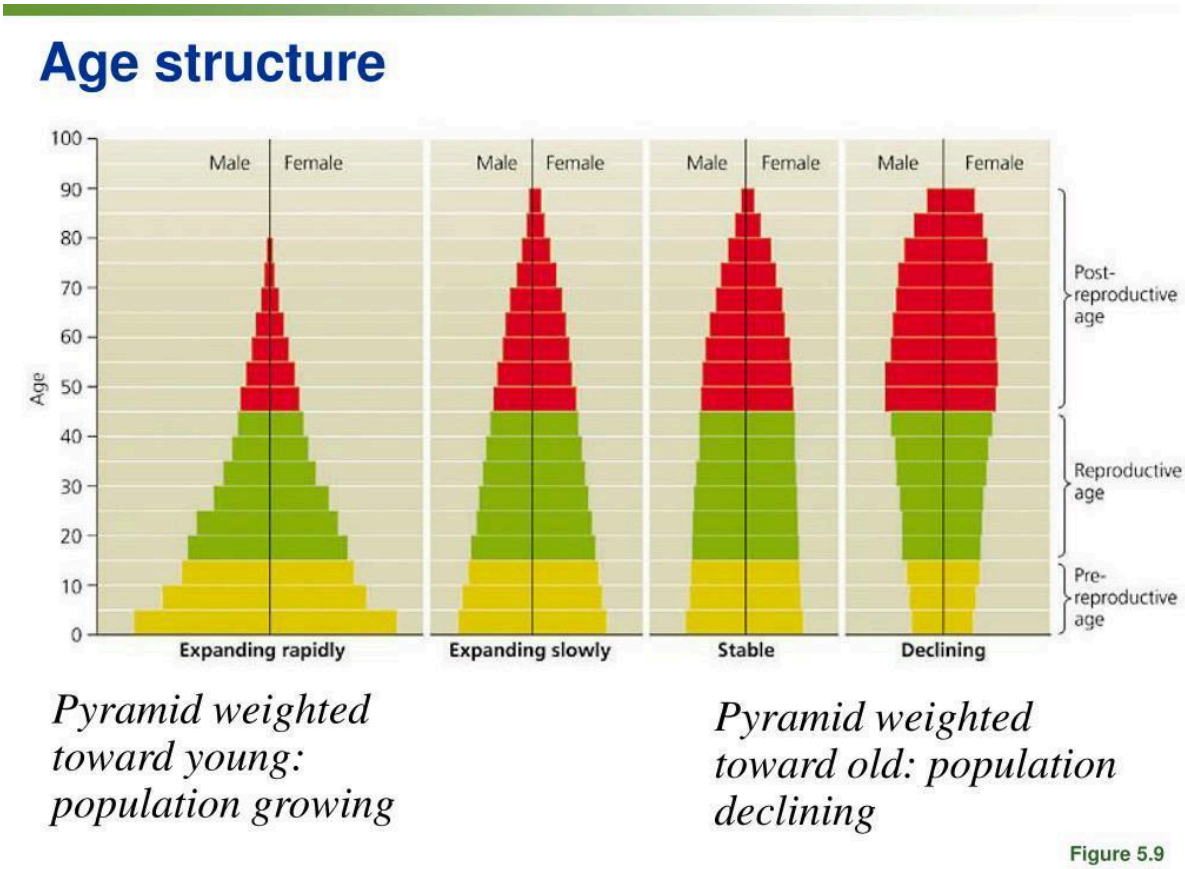
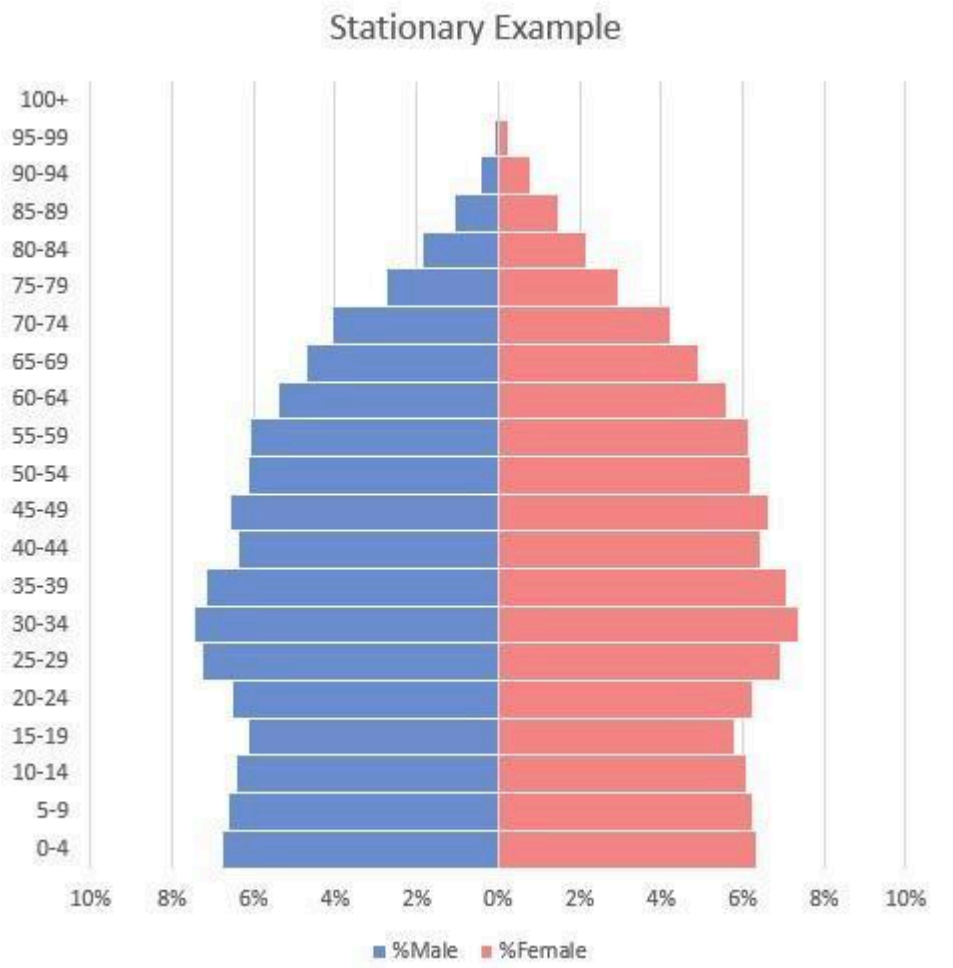


Figure 5.9

1. Expanding population

- A large proportion of young individuals.
- Birth rate is relatively high.
- Population is likely to grow.

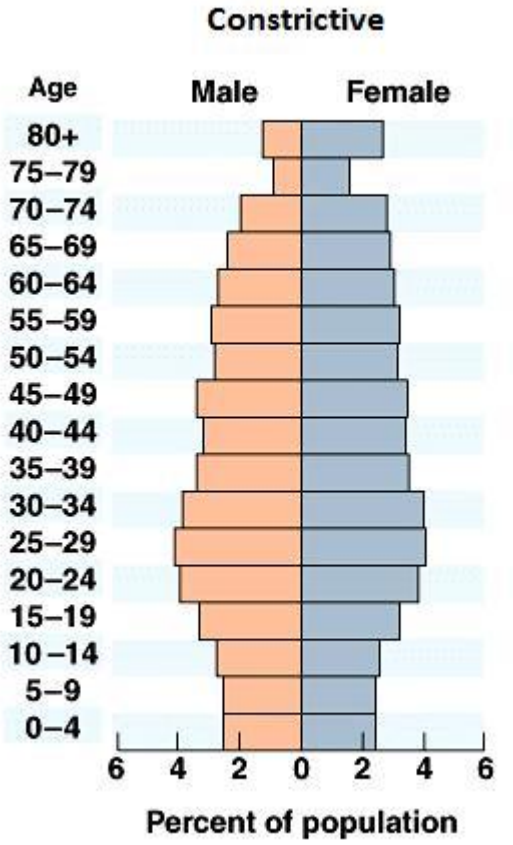
Shape: Broad base, narrow top.



2. Stable population

- Similar proportions of young and middle-aged individuals.
- Birth rate and death rate are approximately balanced.
- Population size remains relatively constant.

Shape: Nearly rectangular.



3. Declining population

- A smaller proportion of young individuals.
- Birth rate is relatively low.
- Population is likely to decrease over time.

Shape: Narrow base, relatively broad middle.

Age groups in a population

Individuals are generally classified into three age categories:

1. Pre-reproductive: Individuals not yet reproducing.
2. Reproductive: Individuals capable of reproduction.
3. Post-reproductive: Individuals beyond their usual reproductive period.

Importance of age distribution

- Predicts future population growth or decline.
- Helps assess reproductive potential.
- Assists in wildlife conservation and population management.
- Helps explain population dynamics in plants, animals and humans.

NEET key point: Age pyramids represent the proportions of pre-reproductive, reproductive and post-reproductive individuals. A broad base generally indicates an expanding population, whereas a narrow base suggests a declining population.