

MODULE - 2

Ecological Concepts and Issues



Notes

Environmental Science Senior Secondary Course

In case of humans, natality or birth rate is usually expressed in terms of births per thousand per year.

- **Mortality:** Loss of individuals from a population due to death under given environmental conditions is called **mortality**. The number of individuals dead in a year is calculated for obtaining the mortality rate or death rate. Mortality rate in human population may be expressed in terms of number of persons dead per thousand per year.
- **Dispersal:** The movement of individuals of a population out of a region on a permanent basis is termed emigration while immigration refers to the movement of individuals into a new area where dispersal includes both emigration and immigration of individuals. The population of a region is affected by dispersal. Active migration is not possible in plants though seeds may be dispersed over long distance by wind, water and animals.

The density of a population thus basically depends on four factors: i) natality, ii) mortality, iii) immigration and iv) emigration (Fig. 4.13)

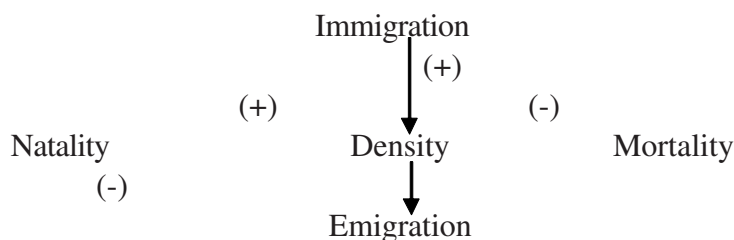


Fig. 4.13: Parameters of population

Age distribution

Natural populations include individuals of all age groups. It, therefore, becomes necessary for us to consider age distribution of a population. Age distribution refers to the proportions of individuals of different age groups in a population. The population may be broadly divided into three age groups:-

- pre-reproductive group: comprising of juvenile individuals or children,
- reproductive group: consisting of individuals capable of reproduction ,
- post-reproductive group: contains aged individuals who are incapable of reproduction.

A rapidly growing population will usually contain a large proportion of individuals in the reproductive age group; a stationary population (where there is no increase or decrease in population) contains an even distribution of all age groups, and a declining population contains a large proportion of old or post-reproductive age of an individuals.

• Sex ratio

Sex ratio is an important aspect of population. It refers to the ratio between female and male individuals in a population