SIZE AND SPACING OF RURAL SETTLEMENT

- The variation in size and spacing of rural settlement is a physically established fact on the earth surface due to variations in environmental conditions.
- According to **Mukherji ,** The covariance of spacing of rural settlements depends on such fundamental factors as

i) fertility of land,

ii) productivity of agriculture,

iii) nature of cops grown,

iv) agronomic characteristic,

v) distribution and availability of water,

vi) density of rural population,

vii) population size and types f rural settlements,

viii) mode of living,

ix) history and stages of land occupancy,

x) relative strenghts of tribal population and several other factors.

- According to **Donglass,** The spacing of rural settlements depends on three factors

i) The agricultural prosperity

ii) Surface relief of the land

iii) Historical perspective of the area.

- According to **Donglass,** the rural settlement is densest where greatest agricultural prosperity is found. Spacing is also an expression of density, but it does not imply a geometrical pattern in the arrangement of settlement.
- **Walenty Winide's** a polish geographer derived a formula to determine the frequency of house/towns in any area. As the settlement are ordinarily placed at the intersection points of a rectangular grid, he assume that the best figure to use for inter settlement distance is equal to the square root of the area, divided by the number of settlements within that area. The formula as follows

$$\mathbf{D} = \sqrt{\frac{A}{N}}$$

Where D is the average distance between settlement A is the total area under consideration and N is the number of settlements within that area.

The method applied for the size of rural settlement is as follows

$$\mathbf{S} = \sqrt{\frac{P}{N}}$$

Where,

S = Size of population (per village),

P = Rural population of Anchal

N = Number of villages in the Anchal

- In India the size and spacing of the rural settlements are mainly depend upon three factors

i) Effects of floods

ii) Natural fertility of the soil

iii) Surface configuration

- A.B. Mukherji (1969) used the following formula to the calculation of spacing of rural settlement for anchal or taluka in miles.

$$S = 2\sqrt{\frac{A}{N}\pi}$$

Where,

S = Spacing in miles,

P = Rural area of Anchal

N = Number of settlement

Spatial pattern of Rural settlement

Four types of spacing of settlement areas have been identified with the help of Median and Quartile values of data on spacing of rural settlement.

a) Areas of very high spacing (more than 3.46 Kms)

b) Areas of very Medium high spacing (3.45 to 2.57 Kms)

c) Areas of low spacing (2.56 to 1.95 Kms)

d) Areas of very low spacing (less than 1.94 Kms)

a) Areas of very high spacing

- In the plain lands of India, the spacing of rural settlement are found to be high and size of villages are also high i.e. Assam and Kerala.
- In the areas of rough topography, the spacing of settlement is also high but due to low agricultural productivity of the land , their relative population size is small.
- For example in Arunachal Pradesh, the spacing between rural settlement is 5.068 kilometres and the average population size just 289 person per village only.

b) Areas of Medium high spacing

- in this category, the spacing of rural settlement varies from 2.57 kms to 3.45 kms from Rajasthan to Madhya Pradesh.
- The Other states fall within this category are Andhra Pradesh, Goa, Maharashtra, Dadar and Nagar Haveli and Haryana.
- In all these states, the relatively high distance between rural settlement caused due to lesser amount of rainfall and rough terrain which do not permit closer spacing of rural settlement.

C) Areas of low spacing

- In this category, the relative distance between the rural settlements varies from 1.95 kms to 2.56 kms.
- It comprises the states of Meghalaya, Delhi, Punjab, Chandigarh, and Assam. These areas are relatively dry which force people to settle closely due to high depth of masonary wells in order to fetch potable water.
- But Assam is the place where flood and rough terrain both dominate the spacing of settlement. The flood has an effect of closer settlements whereas undulating landscape dominates the disperse settlement.

d) Areas of very low spacing

- In this category, the distance between rural settlements vary from 1.94 kms to 0.41 km which is lowest.
- The states which comes in this category are Puducherry (0.41 km), West Bengal (1.62 kms), Tripura (1.55 kms), Himanchal Pradesh (1.94 kms), Bihar (1.71 kms), and Uttar Pradesh (1.73 kms).

In all these states compact or nucleated rural settlements are found.

The spacing of rural settlement and population size of villages decreases drastically in areas free from floods, even though the density of population per square kilometre is high. This means that the availability is the main consideration for the development of settlements in such areas.