



TEKNIK PERSAMPELAN KUADRAT

QUADRAT SAMPLING TECHNIQUE

Kaedah menganggar populasi tumbuhan atau haiwan yang **tidak bergerak**. Kuadrat akan diletakkan secara **rawak** di kawasan kajian dan bilangan organisma dikira. Kaedah ini digunakan untuk menentukan:

A technique to estimate the population of plants and immobile animals. A number of quadrats are placed randomly in the area studies and the organisms found within in the quadrat are counted. This method is used to determine:

1. **Frekuensi** atau **kekerapan** organisma ditemui dalam satu habitat.

Frequency of organisms found in a habitat.

$$\begin{array}{l} \text{Frekuensi} \\ \text{Frequency} \end{array} = \frac{\begin{array}{l} \text{Bilangan kuadrat yang mengandungi spesies} \\ \text{Number of quadrats containing the species} \end{array}}{\begin{array}{l} \text{Bilangan kuadrat / Number of quadrat} \end{array}} \times 100\%$$

2. **Kepadatan populasi**, iaitu bilangan individu spesies dalam seunit luas habitat.

Population density is the number of individual species in each habitat.

$$\begin{array}{l} \text{Kepadatan} \\ \text{Density} \end{array} = \frac{\begin{array}{l} \text{Jumlah individu spesies dalam semua kuadrat} \\ \text{Total number of individuals of a species in all quadrats} \end{array}}{\begin{array}{l} \text{Bilangan kuadrat x Luas kuadrat} \\ \text{Number of quadrat x Area of each quadrat} \end{array}} \times 100\%$$

3. **Peratus litupan**, iaitu luas kawasan yang dilitupi oleh satu spesies dalam satu kawasan di habitat.

Percentage coverage is the area by a single species in a certain area of a habitat.

$$\begin{array}{l} \text{Peratus litupan} \\ \text{Percentage coverage} \end{array} = \frac{\begin{array}{l} \text{Jumlah luas litupan spesies dalam semua kuadrat} \\ \text{Total area covered by the species in all quadrats} \end{array}}{\begin{array}{l} \text{Jumlah kuadrat x Luas kuadrat} \\ \text{Number of quadrat x Quadrat area} \end{array}} \times 100\%$$