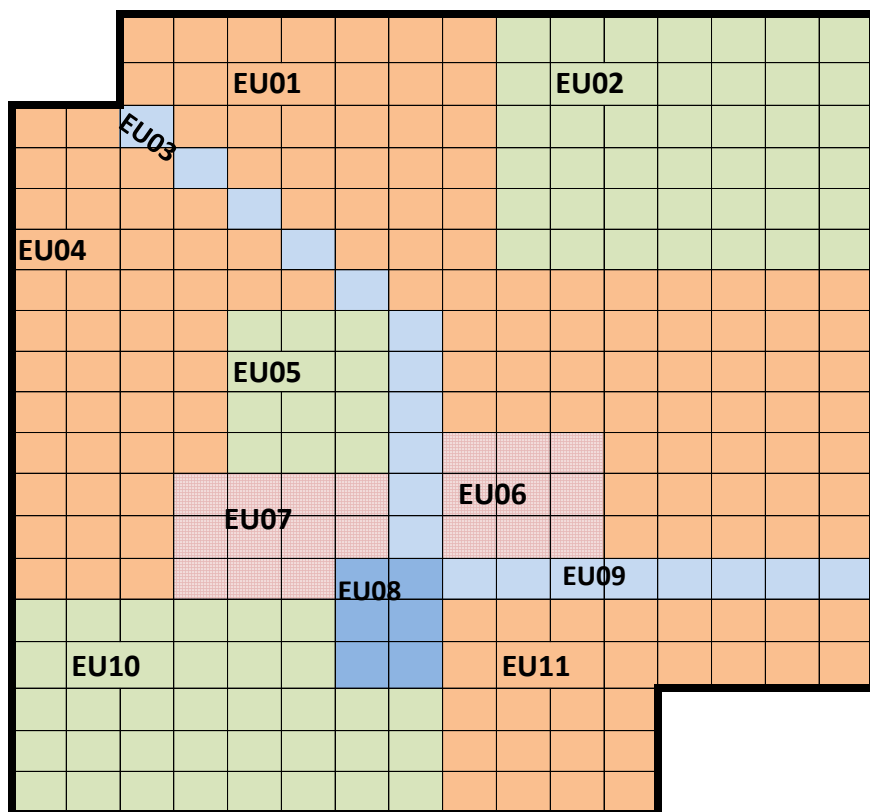**Spatial Units: Group Exercise 1: Calculate area of each EU and EU type**



Note: One BSU = 250m*250m = 6.25 ha

EAU area = 288 BSUs = 18 km$^2$

1 ha = (100m x 100m) = 10,000m$^2$
1 km$^2$ = 100 ha = 1,000,000m$^2$

**EU Table**

| EU | BSU count | Area (km$^2$) |
|---|---|---|
| EU01 = Herbaceous crops | | |
| EU02 = Tree covered areas | | |
| EU03 = Inland water bodies | | |
| EU04 = Herbaceous crops | | |
| EU05 = Tree covered areas | | |
| EU06 = Artificial surfaces (urban) | | |
| EU07 = Artificial surfaces (urban) | | |
| EU08 = Shrubs..regularly flooded (wetland) | | |
| EU09 = Inland water bodies | | |
| EU10 = Tree covered areas | | |
| EU11 = Herbaceous crops | | |
| Total | | |

**Summary Table**

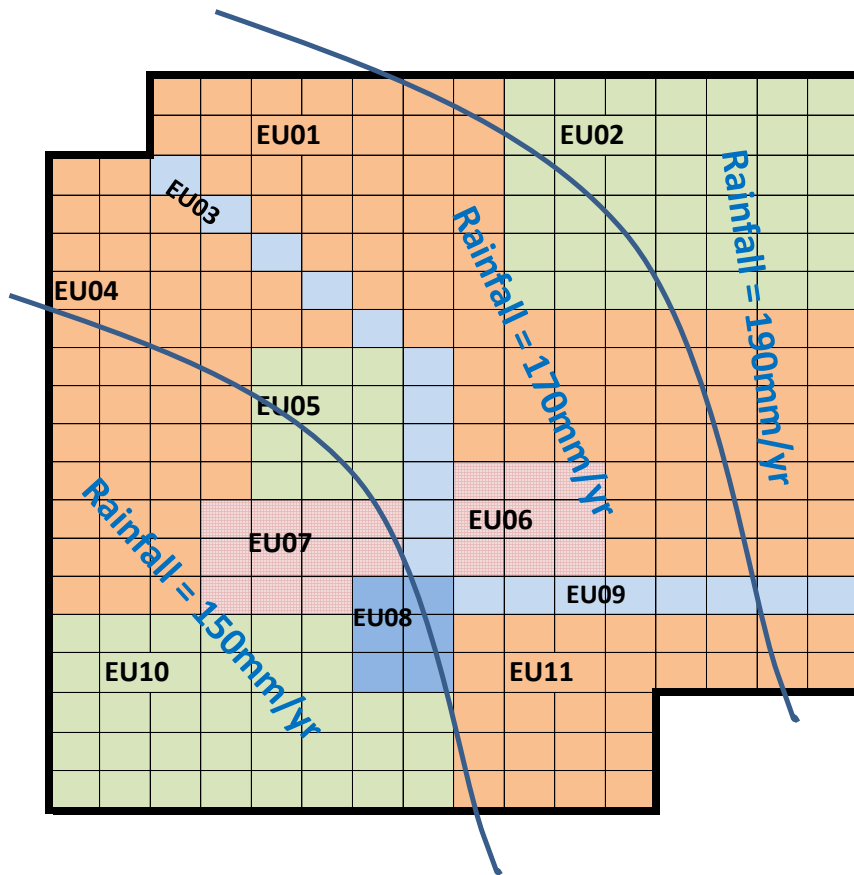| EU Type | BSU count | Area (km$^2$) |
|---|---|---|
| Artificial surfaces (urban) | | |
| Herbaceous crops | | |
| Tree covered areas | | |
| Inland water bodies | | |
| Shrubs..regularly flooded (wetland) | | |
| Total | | |

*Note: 1 Km$^2$ = BSU count / 16*

**Instructions: (1) Count the BSUs in each EU and record in the BSU Count column of the EU Table.**
**(2) Calculate the area for each EU**
**(3) Add the BSU Count and Area for each EU type and record in the Summary Table**

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**Spatial Units: Group Exercise2: Calculate average rainfall (mm/year) for each EU**



**Rainfall table**

| EU02 | BSU Count | Total rainfall (mm) | |
|---|---|---|---|
| A: Rainfall = 190mm/yr | | | =BSU*190 |
| B: Rainfall = 170mm/yr | | | =BSU*170 |
| **Total** | | | = A + B |

**Rainfall summary table**

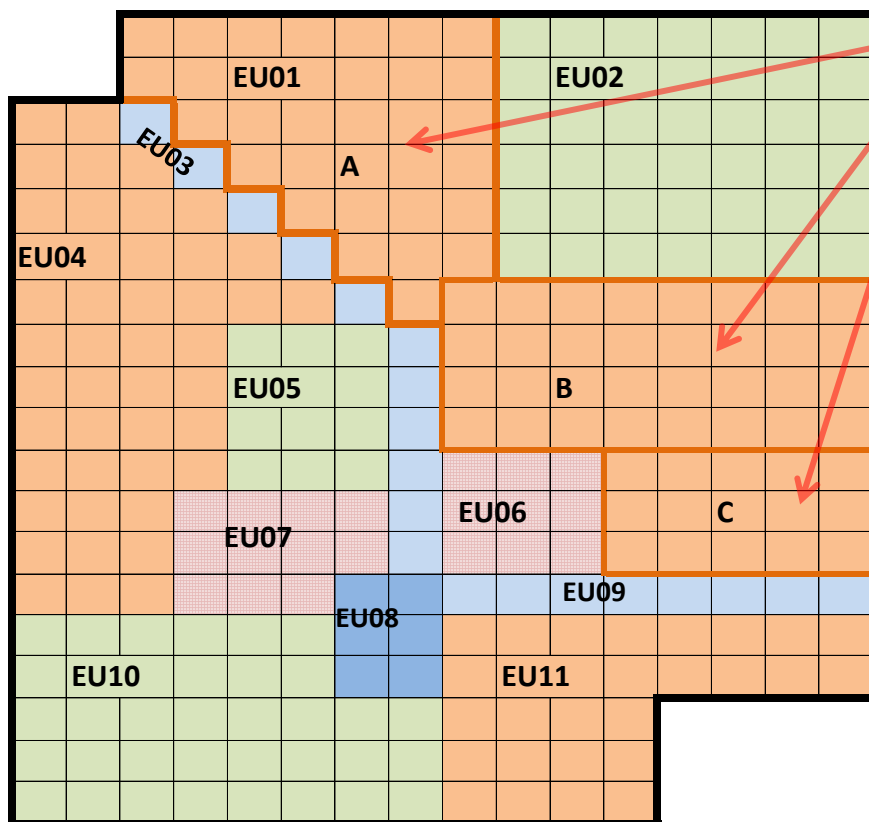| | BSU Count | Average rainfall (mm) | |
|---|---|---|---|
| **EU02 average Rainfall** | | | =(A+B)/(BSU Count) |

**Instuctions: (1) For EU02 only, count the number of BSU in each rainfall band. Record in the BSU Count column of the Rainfall Table. Count partial BSUs as well.**

**(2) Calculate the Total rainfall**

**(3) Calculate the Total BSU Count for EU02.**

**(4) Calculate the Average rainfall for EU02 (Total rainfall/total BSU count)**

**Spatial Units: Group Exercise3: Calculate average production (Tonnes/ha) for EU01**



**Farm productivity**

| Farm | Production (tonnes) | BSU Count | Productivity (tonnes/ha) | |
|---|---|---|---|---|
| A | 6,500 | | | =Production / BSU / 16 |
| B | 9,000 | | | =Production / BSU / 16 |
| C | 3,200 | | | =Production / BSU / 16 |

**EU01 Productivity**

| | Total Production | BSU Count | Average Productivity | |
|---|---|---|---|---|
| EU01 | | | | =Production / BSU / 16 |

**Instructions:  (1) Count the number of BSUs in each farm (A, B, and C). Record the results in the BSU Count column.**
**(2) Calculate the Productivity of each farm (A, B, and C). Record in the result in the Productivity column.**
**(3) Calculate the Total Production for EU01. Calculate the Total BSU Count for EU01.**
**(4) Calculate the Average Productivity for EU01.**