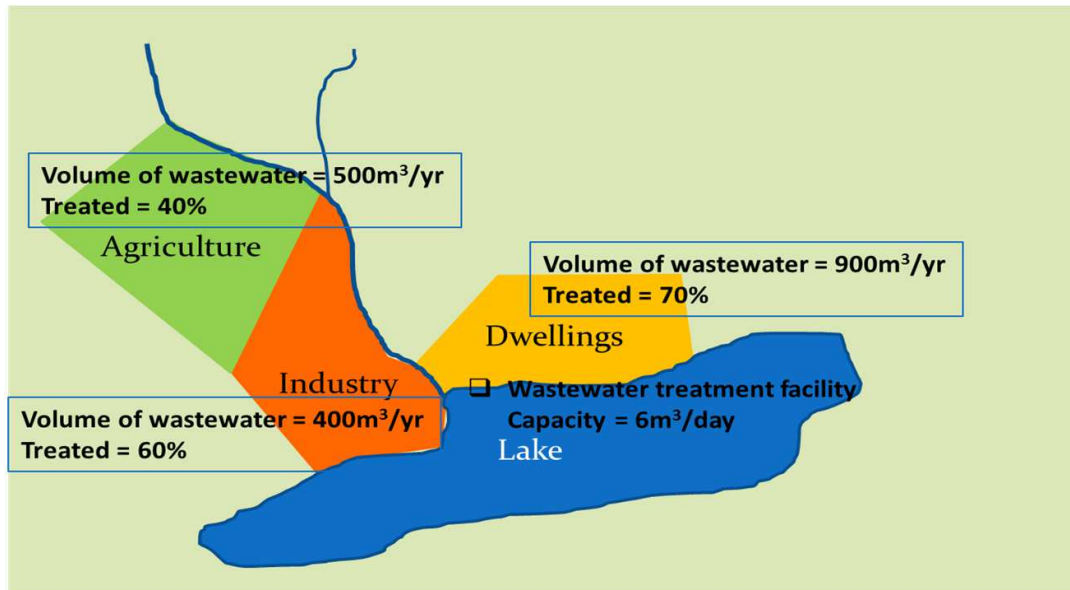


Environment Statistics Training - FDES Chapter 3.3 Residuals

Instructions

1. Region with 3 sources of wastewater, one treatment plant



2. Calculate total wastewater, volumes treated, volumes untreated

Wastewater sources and volumes (m³/year)

Source	Total volume (m ³ /yr)	% treated	Volume treated	Volume untreated
Agriculture				
Industry				
Dwellings				
Total				

4. What is the average treatment rate for all sources?

5. Have data on seasonal total volumes of wastewater.

Seasonal flow of wastewater

Source	Total volume (m ³)				Total
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
Agriculture	100	50	300	50	500
Industry	50	100	200	50	400
Dwellings	100	200	450	150	900
Total	250	350	950	250	1,800

6. Calculate seasonal daily average of treated wastewater (assume 91 days per season)

Volume treated

Source	Total volume (m ³)				Total
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
Agriculture					
Industry					
Dwellings					
Total					
Average/day (m ³)					

7. For which season is there a risk of exceeding the capacity of the treatment plant? (6m³/day)