**R intensive using the snail dynamics dataset – Day 2 Worksheet**

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**EXERCISE TO PRACTICE R SKILLS**

You will be using the Year\_data data set to subset, summarize and visualize data.

1: Set working directory, load the tidyverse package and read in .csv file:

*> setwd()*

*> library(tidyverse)*

*> Year\_data=read.csv()*

2: Question: how many surveys in Kwimba were dry between August 2021 and July 2022?

Clue: What functions will isolate the data you need to answer this question?

*> Kwimba\_surveys=*

*> Kwimba\_drysurveys=*

3: Question: Which waterbody in Kwimba has the highest number of dry months?

Clue: which summary statistics function allows us to identify the number of water bodies that are dry?

*> Dry\_months=*

4: Question: How many snails are there in total in each water body in Kwimba in the data set?

Clue: How do you isolate the waterbodies of interest? What will your group the surveys by? What summary statistics function will you use to get total snail numbers?

*> Kwimba\_totals=*

5: Build a graph that depicts the total number of snails in each water body in Kwimba. You will use the dataset you created in section 4 as your input data. You will build a barplot, which is appropriate for data that has totals by some category (in this case water body). Enter the names of the columns that you use for the x and y axis below:

*> ggplot(data=Kwimba\_totals, aes(x=,y=) +*

*geom\_bar(stat=* *"identity", fill=c("blue","powderblue", "red", "purple", "goldenrod"))+*

*scale\_x\_discrete(guide = guide\_axis(angle = 30))*

The above code include information within the geom\_bar() function that tells it to (1) use the total number for the height of the bars and (2) fill the bars with five specific colors I have chosen. The scale\_x\_discrete() function includes information that tells R that the axis names (the name of the water bodies) are rotated 30 degrees so we can read them better.

You can add x and y labels and a title. Go back to the script from yesterday to add these elements .