Data description

- **Definition:**
    - A summary of the datasets available for analysis

Data Provenance

- Datasets shared with us by Dr. McGrath
    - Measurements conducted by student volunteers or farmers and input by Dr. McGrath or Rehan Ali

Summary of the datasets available for analysis

- **2019 Data**
    - Carbon Estimates 2019
        - A google sheet with all of the 2019 data needed for this project. More specifically the data includes records of every farm and all of the trees that they have planted. From this information specific allometric equations determined the sequestered carbon and the necessary payments for the farmers based on the amount of sequestered carbon.
    - Carbon Payments 2019
        - A google sheet with data from 2015 to 2019 regarding the payments to farmers based on the amount of sequestered carbon. The payments are determined from sequestered carbon, which was calculated in the Carbon Estimates 2019 google sheet, and then the payments are converted from USD to Haitian gourdes.
    - Farm Summary 2019
        - This google sheets data set provides information on the number of trees each farm has measured throughout the years, classified by species. The first sheet contains a column for each species and quantifies how many trees were on each farm in 2014, 2018, and 2019. The following sheets are labeled by species, including ‘Akajou’, ‘Ced’, ‘Kafe Typica’, ‘Kafe Katoura’, and ‘Mango’. These sheets detail the change in number of trees per farm as well as change in height and diameter growth.

- **2021 Data**
    - ZK Tree Survey 2021
        - A google sheet with all of the 2021 tree measurements that contains a specific sheet for each farm. The primary sheet contains

household names and changes in tree totals per farm from 2019 to 2021. The following sheets provide information on each tree listing the species, height, and diameter of each tree. The data set also includes a list of people who conducted the measurements on each farm to provide a way for verification if any discrepancies in the data occur. From this dataset we will input the measurements into allometric equations and determine the amount of CO2 sequestered by each household's farm.

Data Dictionary (for ZK Tree Survey 2021):

Sheet 1: Households

Variable	**Description**	**Variable Type**
a	Household Number	Numerical
Name	Last Name of Farmer	Character
First Name	First Name of Farmer	Character
Old PDF pages	Page numbers for Farmer data on Old PDF pages	Numerical
New PDF pages	Page numbers for Farmer data on New PDF pages	Numerical
Total tress 2019	Number of Trees Planted on Farms in 2019	Numerical
Est Total trees 2021	Number of Trees Planted on Farms in 2021	Numerical
Survey team member	Name of Person Who Surveyed Trees (⅓)	Character
Survey team member	Name of Person Who Surveyed Trees (⅔)	Character
Survey team member	Name of Person Who Surveyed Trees (3/3)	Character

Sheet 2: Survey Team

Variable	Description	Variable Type
Farm No	Household Number	Numerical
Name	Last Name of Farmer	Character
First name	First Name of Farmer	Character

Sheet 3: Template

Variable	Description	Variable Type
Tree # (Nimewo)	The Number of the Tree	Numerical
Species (Espes pyebwa) Species Key: K=Kafe M=Mango C= Ced KK=New Kafe A=Acajou	The Name of the Tree Species	Character
Ht (cm) (Wote)	Height of the Trees in cm	Numerical
diameter (mm) (Dyamet)	Diameter of the Trees in mm	Numerical
diameter (cm) (Dyamet)	Diameter of the Trees in cm	Numerical
Coffee cherries? (Seriz kafe) W = Yes N = No	If the Tree is Coffee cherries (honestly not sure about this one)	Character

Sheet 4 - 54: Individual Household Tree Surveys (skipped over Household 28)

Variable	Description	Variable Type
Household	Name of Farmer	Character
Tree # (Nimewo)	Number assigned to each tree	Numerical
Species (Espes pyebwa)	Name of tree species K=Kafe	Character

	M=Mango C= Ced KK=New Kafe A=Acajou	
Ht (cm) (Wote)	Height of the tree in centimeter	Numerical
Diameter (mm) (Dyamet)	Diameter of the tree in millimeters	Numerical
Diameter (cm) (Dyamet)	Diameter of the tree in centimeters (May substitute diameter in mm)	Numerical
Coffee cherries? (Seriz kafe) W = Yes N = No	Record of whether the tree has produced fruit (Cherries contain coffee beans)	Character
Circumference to diameter	Conversion of circumference in the instance of incorrect measurement	Numerical
Diameter to inches	Conversion of diameter from centimeters/millimeters to inches	Numerical