**Team Lake Victoria**

**Perception vs Reality: How the consequences of eutrophication impact subsistence fishery communities around Lake Victoria**

**Summer institute:**

**Title:** Riparian Households Adaptive Behavior and Perception of Changing Water Quality in Lake Victoria

**Background**

* Communities across the world rely on local aquatic resources for food or drinking water
* Lake Victoria is the world’s largest freshwater fishery and supports millions of people
* Eutrophication impacts on water quality may be challenging in places with no or unreliable alternatives
* Changes in water quality at the source will influence households’ adaptive behaviors in different ways -  health, fish yield/productivity, and overall livelihood and **water treatment practices**.
* Changes in the adaptive behavior of households may provide an indication of their perception of the water quality at source. This will provide us with an indication of household perception on the safety of the water source

**Research Questions:**

1. Is there an association between water treatment practices and perception of water quality at the source?
2. *What is the perceived safety status of Lake Victoria water relative to other water sources?*

**Datasets**

* Demographic and Health Survey (Source of water, treatment, HH income and HH expenditures, education)
  + Drinking water module guide: <https://dhsprogram.com/Data/Guide-to-DHS-Statistics/Household_Drinking_Water.htm>
* Census data (Kenya, Tanzania, Uganda)
* 2014 Inequalities Survey (for riparian counties): source of drinking water, treatment specified; not available in Tanzania/Uganda??

**Collaborators:**

* Horace Owiti
* Dorothy Birungi
* Harriet Okronipa
* Patrick Mbullo

**Next Steps**

* Pull together all the data from the different sources
* Write a data analysis plan
* Data analysis

**Variables and analytical framework**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Source** | **Qxn #** | **Description** | **Comment (s)** |
| **Age** | **DHS** | **7** |  |  |
| **gender** | **DHS** | **4** |  |  |
| **Occupation** | **DHS** |  |  |  |
| **Household size** | **DHS** |  |  |  |
| **Education** | **DHS** | **16, 17** |  |  |
| **Drinking water source** | **DHS** | **101** |  |  |
| **Source of water for domestic use** | **DHS** | **102** |  |  |
| **Location of water source** | **DHS** |  |  |  |
| **Water treatment (yes/no)** | **DHS** | **108** |  |  |
| **How do you treat your water** | **DHS** | **108** |  |  |
| **Household toilet facility type** | **DHS** | **109** |  |  |
| **Where is septic tank emptied to** | **DHS** | **116** |  |  |
| **Type of cooking stove** | **DHS** | **117** |  |  |
| **Source of lighting in home** | **DHS** | **126** |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Responsibility | Timeline | Remarks |
| Upload DHS data (apply to use) | Patrick | done-ish |  |
| Lake Victoria Water Sanitation (check for relevance?) | Horace/Robert | March 20th |  |
| National census data | Horace - Kenya, Dorothy - Uganda and Tanzania (will work with Geofrey) | March 1st |  |
| In person meeting | All who are in Kenya (Harriet, Amber, Patrick, Horace, Dorothy) | March |  |
| Water quality data | Jess and Amber | April 1st for description |  |
| Data analysis plan | All | April 20th for discussion based on data sources; will need >1 call to finalize | Have a call once data are ready |
| Identification of journal | All |  |  |
| Background writeup | Horace, Dorothy, Harriet | May 15th |  |
| Materials and methods | All | June 15th |  |
| Analyses and discussion |  | June 15th - also during Data Science Institute July 20 - 24th |  |
| Draft 0 |  | Aug 15th |  |