



CONSERVATION
INTERNATIONAL



Hackathon Team 11

<https://github.com/awshackathonteam11/convint.git>

AWS Architecture (Proposed)



```
input {
  jdbc {
    jdbc_connection_string => "jdbc:postgresql://convint.c7sjjocud5mb.us-east-1.rds.amazonaws.com:5432/vitalsigns_staging?user=postgres&password=postgres"
    jdbc_user => "postgres"
    jdbc_validate_connection => true
    jdbc_driver_library => "/var/tmp/pg/postgresql-9.4.1212.jre6.jar"
    jdbc_driver_class => "org.postgresql.Driver"
    statement_filepath => "/var/tmp/pg/all.sql"
  }
}
```

```
#input {
#  s3 {
#    bucket => "convint"
#    access_key_id => "AKIAIHWGI5KGVS44GQNQ"
#    secret_access_key => "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"
#    region => "us-east-1"
#    interval => "60"
#    prefix => "/"
#    since_path => "/data/convint.db"
#  }
#}
```

```
filter {
  if [latitude] and [longitude] {
    mutate {
      add_field => [ "[location]", "%{longitude}" ]
      add_field => [ "[location]", "%{latitude}" ]
    }
    mutate {
      convert => [ "[location]", "float" ]
    }
  }
}
```



Model Cloud BI Architecture

Raw data

Collect/Store

Store/Analyze

Data warehouse

Analysis

Flat files

Application data

Server logs

Internet APIs



S3



EMR

Spark
Spark



Hive



Redshift



RDS

Machine Learning



Tableau Desktop



Tableau Server

household

agric

agric_field_details

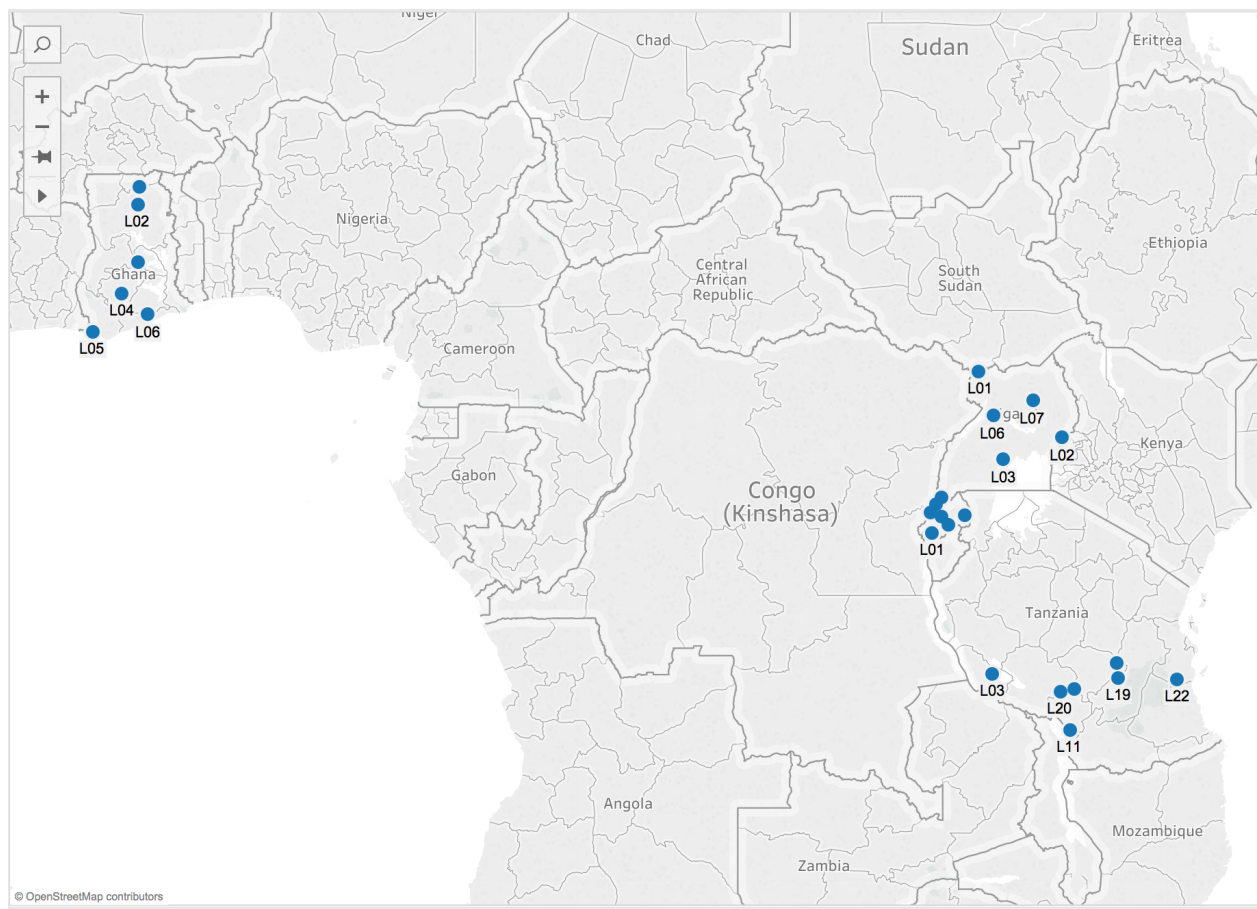
farmfieldsoils

eplot

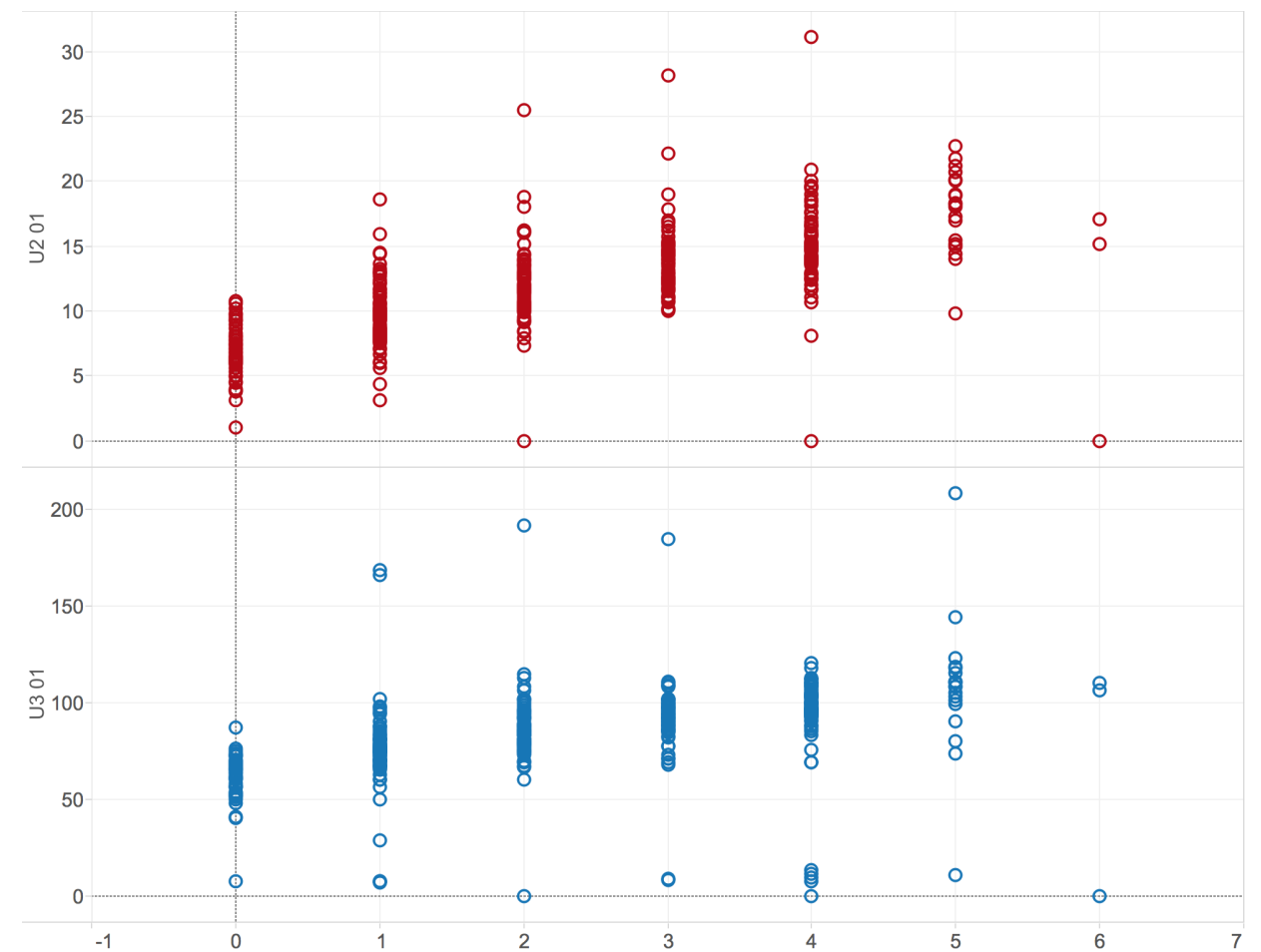
household_secB

household_secU

- **Using only Household-level data**
 - Which landscapes in a given country currently have the highest rates of fertilizer use.
 - The relationship between parent's education levels and children's nutrition status.



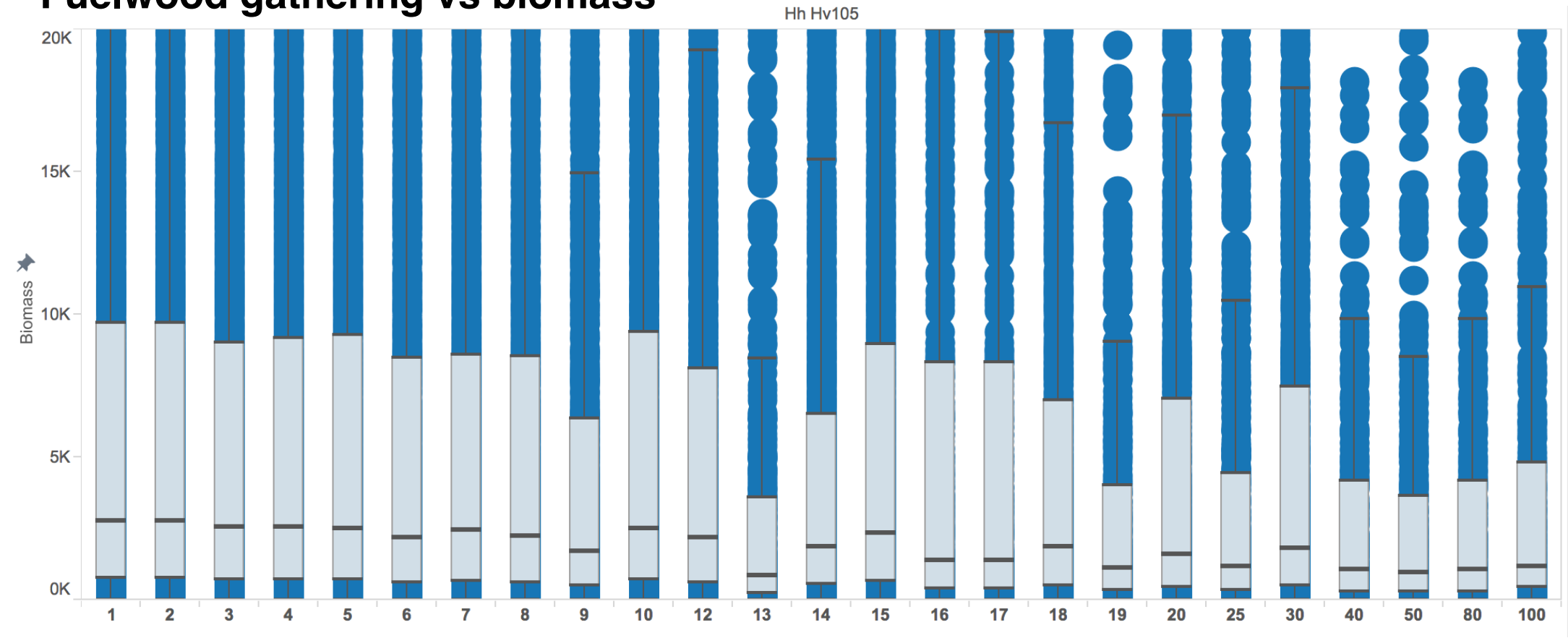
Landscape with Fertilizer Usage



Parents edu vs. Child nutri.

- Using Household and Ecological data
 - How household fuelwood gathering practices affect biomass in nearby forests.
 - If plant species richness/biodiversity is related to soil health, in forests and in farmers fields

Fuelwood gathering vs biomass



Soil Health vs bio diversity

