

Field Trip: Rwanda

Dec 11-15 2023
Soil Sampling and Site visit.

Dec 11th_Mugonera Hospital (Karongi District)

- Medical Director:
 - Name: Mwumvaneza Mutagoma
 - Phone: 250-783-050-19; 250-788-305-600
- Suggestions on how to contact patients with Podoconiosis:
 - Go through local health centers
 - Community health workers have the information on people with Podoconiosis
- Important notes to include in the research proposal to the ethics committee:
 - What will be the direct benefits to patients participating in the research
 - Free treatment for 1 year
 - Free MUTUEL de santé
 - Transport for patients during data collection

Dec 12th_ C2 Cyuve Village Sampling (Musanze District)

- GPS Coordinates?: -1.47790832682, 29.6418033409
- Why sample at this location?
 - **Hypothesis:** Volcanic ash deposit + weathering of volcanic parent rock might be the sources of podo inducing mineral (imogolite)?
 - **Parent rock mineralogy:** Gahinga Volcano_Augite, Oligoclase, Olivine
 - **Land Cover:** Forest
 - **Soil type:** Andosol
 - **Ash deposition:** ?
 - **Sampling Methodology:** Soil Auger, At each 20cm depth, Soil Sample were kept in bag until we have reached a depth of 80cm
- What is the prevalence of Podo in this site:
 - ?

Dec 12th_ C2 Cyuve Village Pictures





Dec 13th_A1.1 Slope Sampling (Musanze District)

- GPS Coordinates?: -1.4198875106256745, 29.673955924808975
- Why sample at this location?
 - **Hypothesis:** Volcanic ash deposit + weathering of volcanic parent rock might be the sources of podo inducing mineral (imogolite)?
 - **Parent rock mineralogy:** Muhabura Volcano_Augite, Andesite, Olivine
 - **Land Cover:** Forest
 - **Soil type:** Andosols
 - **Ash deposition:** ?
 - **Sampling Methodology:** U channels for soil profiling, Soil Auger, On soil horizon, Sample were taken at each 10cm depth up to 150cm.
- What is the prevalence of Podo in this site:
 - Yes

Dec: 13th_A1.1 Slope Sampling Pictures



Dec 13th_A1.1 Riverbank Sampling

- GPS Coordinates?: -1.419723, 29.673891
- Why sample at this location?
 - **Hypothesis:** Volcanic sediment deposition/ soil erosion + weathering of volcanic parent rock might be the sources of podo inducing mineral (imogolite)?
 - **Parent rock mineralogy:** Muhabura Volcano_Augite, Andesite, Olivine
 - **Land Cover:** Forest
 - **Soil type:** Andosols
 - **Ash deposition:** ?
- What is the prevalence of Podo in this site:
 - Yes

Dec 13th_A1.1 Riverbank Sampling Pictures



Dec 14th_INES Ruhengeri Meetings

- Ethics committee
 - Dr. Jean Baptiste Mazarati
 - Requirements: <https://www.rnecrwanda.org/requirements.php>
 - If possible to share documents with Mazarati for Checking before application process
- MTA (Material Transfer Agreement) collaboration with Berkeley and INES Ruhengeri.
 - Dr. Thierry Habyarimana
 - Phone: +250783025850
- DNA lab visit
- Chemistry lab visit

INES Ruhengeri Lab Visit Pictures





TISSUE FLOTATION BATH
(Important instructions)

- > Don't exceed 45°C in water to not harm the ribbons.
- > Be careful when fishing the sections of interest.

TISSUE FLOTATION BATH

Dec 14th_Kirambo Village Health Center (Burera District)

- Director of health center:
 - Theodore_Phone: +250786321573
- Chief community Officer:
 - Donotha: +250783048907
 - Eric; +250784022167 (Community Health Officer, Kirambo HC)
- Chief of NCDs in Burera:
 - **Gilbert Ndinayo**: he is collecting a database of people leaving with disabilities (including podo) in the district of Burera
 - Phone: +250782378414
- Burera has 19 health centers:
 - Cyeru HC: number
 - Ntaruka HC
 - Kinoni HC
 - Kirambo HC
 - Rusarabuye HC

Dec 14th_Kirambo Village Sampling

- GPS Coordinates?: -1.4959222846827251, 29.829071760177621
- Why sample at this location?:
 - **Hypothesis:** Volcanic ash deposit might be the source of podo inducing mineral (imogolite) as this region has no presence of andosols nor volcanic parent rock?
 - **Parent rock mineralogy:** Schist
 - **Land Cover:** Agricultural
 - **Soil type:** Ultisols/Oxisols
 - **Ash deposition:** ?
 - **Sampling Methodology:** U Channels for soil profiling, Soil were also sampled at each 10cm depth up to 160cm
- What is the prevalence of Podo in this site:
 - Yes_hotspot

Dec 14th_Kirambo Village Sampling Pictures





Dec 15th_CAVM Busogo Campus, Musanze District

- GPS Coordinates?: -1.554292617308583, 29.557185955345627
- Why sample at this location?:
 - **Hypothesis:** Volcanic ash deposits and sediment deposition from soil erosion from the volcanoes will be recorded in the floodplain?
 - **Parent rock mineralogy:** ?
 - **Land Cover:** Floodplain river bed with agricultural
 - **Soil type:** ?
 - **Ash deposition:** Maybe visible evidence of ash presence
 - **Sampling Methodology:** U Channels, Depth soil sampling at each 10cm up to 160cm
- What is the prevalence of Podo in this site:?
- **CAVM** means: College of Agriculture and Veterinary Medicine



Dec 15th_Bigogwe Mining cite

- GPS Coordinates?: -1.6334937388041724, 29.413890950381756
- Why sample at this location?:
 - **Hypothesis:** Volcanic ash deposit + weathering of volcanic parent rock might be the sources of podo inducing mineral (imogolite)?
 - **Parent rock mineralogy:** Volcanic rock
 - **Land Cover:** Bare
 - **Soil type:** Andosols
 - **Ash deposition:** visible evidence of ash presence
 - **Sampling Methodology:** Soil depth sampling on different Horizons
- What is the prevalence of Podo in this site:

Dec 15th_Bigogwe Mining cite Sampling Picture







