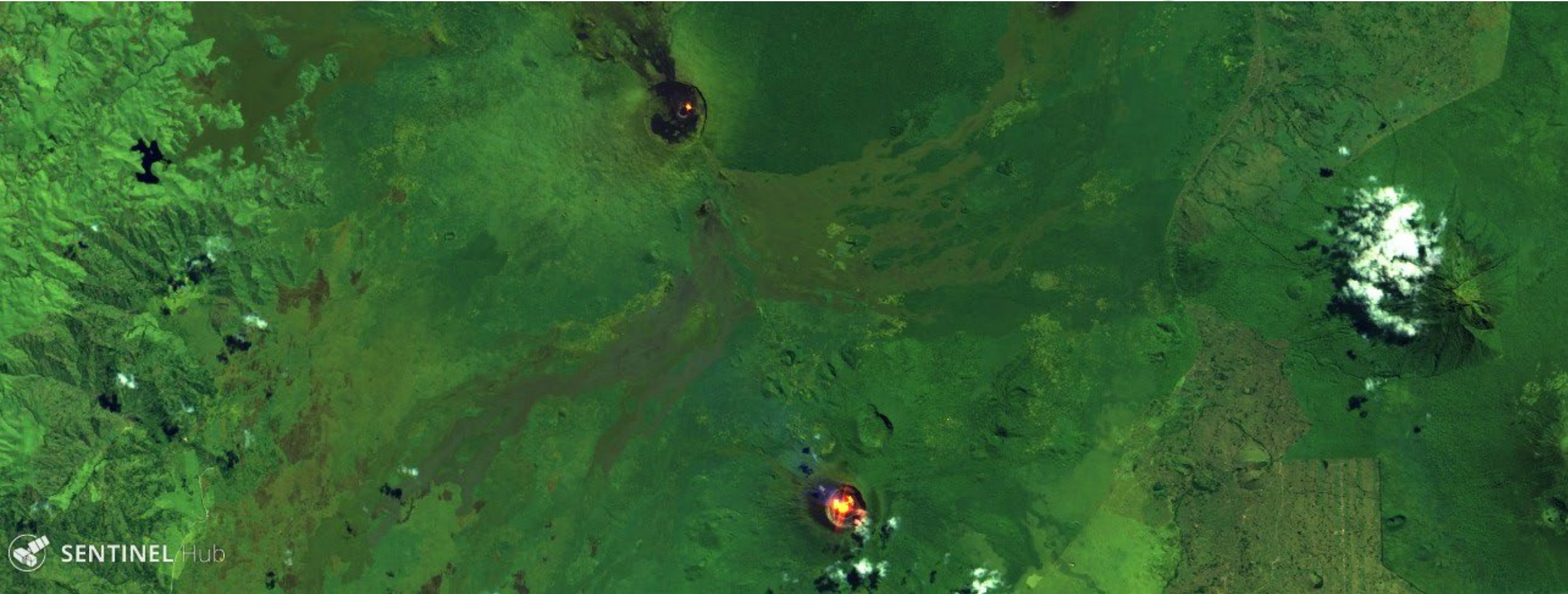
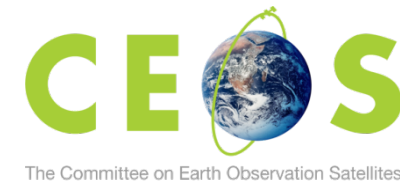


Virunga Geohazards Supersite



Charles Balagizi
Virunga Supersite coordinator
Goma Volcano Observatory

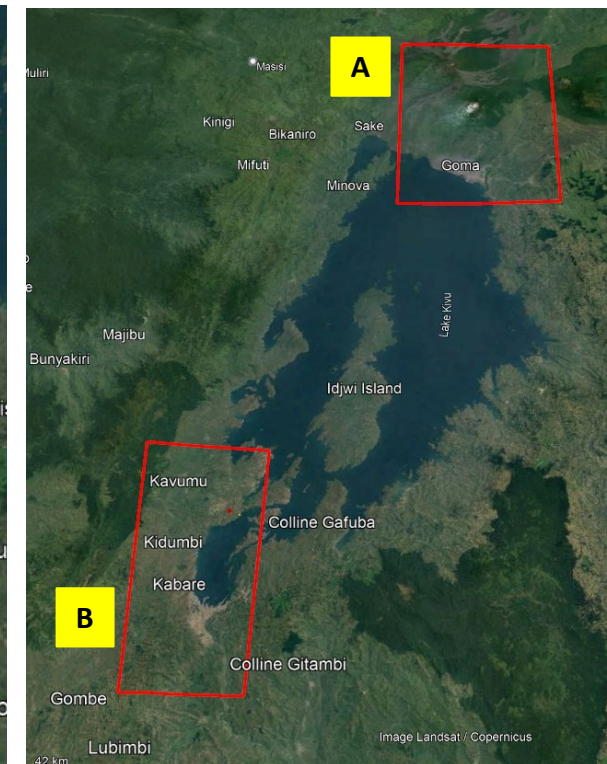
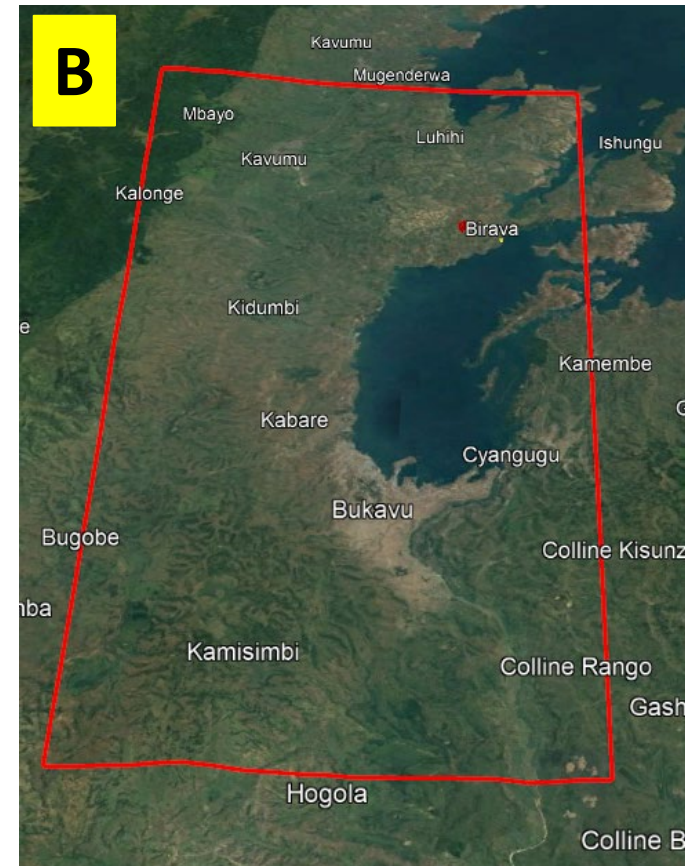
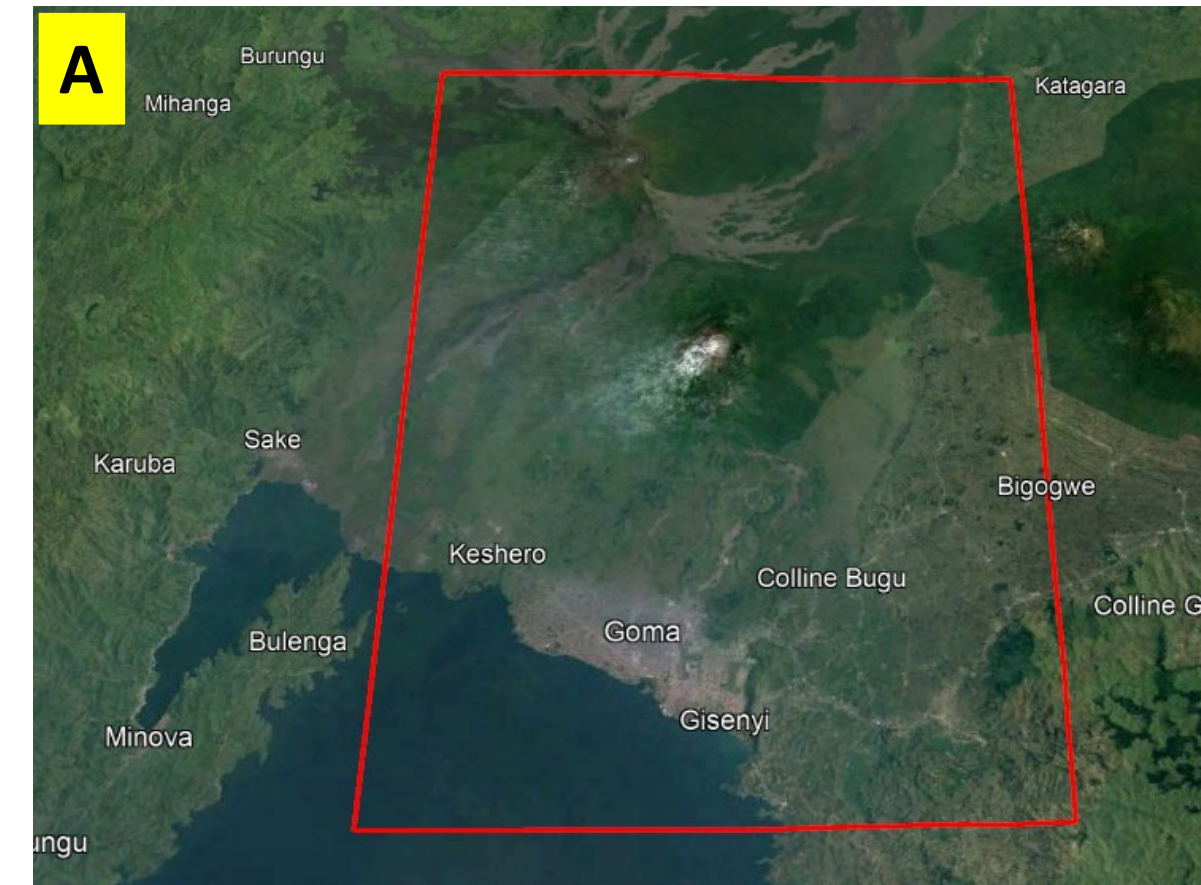


1. Access to Earth Observation imageries

1.1. We continue to access COSMO-SkyMed, Pleiades images

1.2 Request has been made to access SAOCOM 1 images (produced by Comisión Nacional de Actividades Espaciales, Argentina)

1.3. New programming has been made to collect Pleiades images in the Nyiragongo and Nyamulagira field (A), this will be the second coverage after the May 2021 Nyiragongo eruption. Another collection has been requested for Bukavu (B) as there was remaining quota



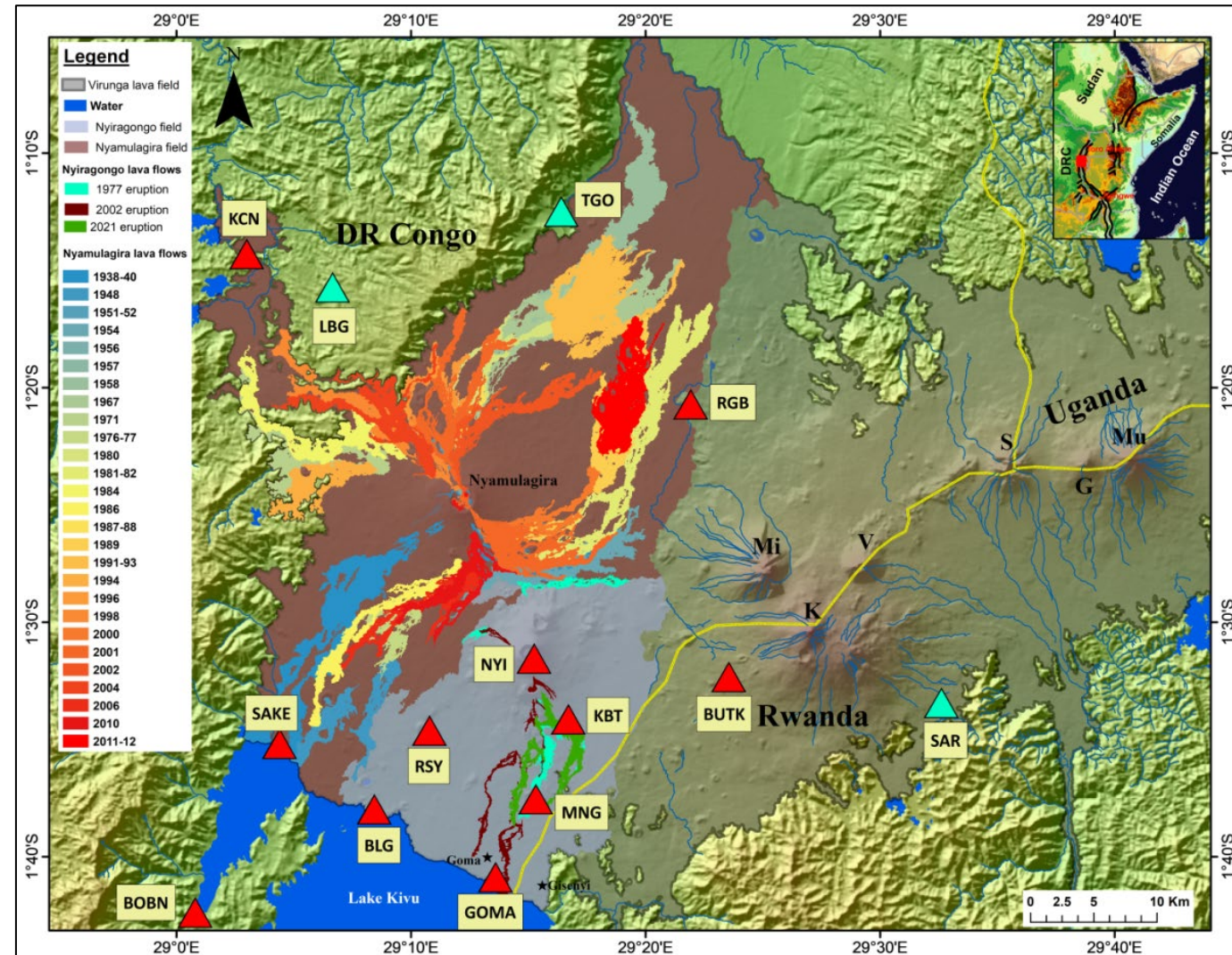
2. Supporting GVO for ground-based data collection

1. The Goma Volcano Observatory has almost finished to building up its own seismic network, data is telemetered to the Observatory and processed there.

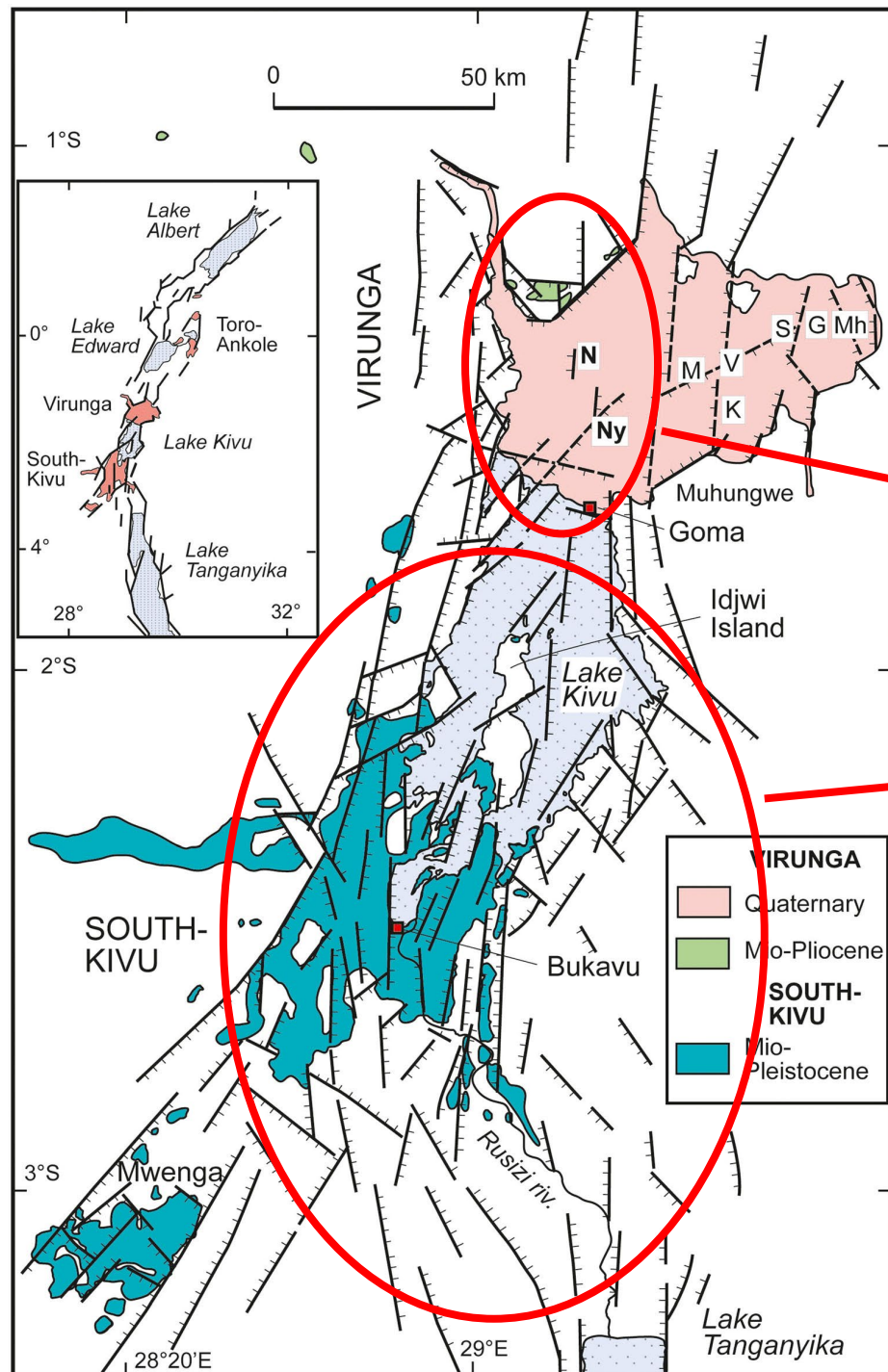
This network has been improved as we now have 12 operating stations.

2. The GEO-GSNL has donated 5 GNSS stations to GVO, which will be delivered to the GVO by end of April 2023. A local bank has also donated 5 other GNSS stations. These 10 stations will soon be installed in the field of Nyiragongo and Nyamulagira volcanoes.

The GNSS network will then be operational, and will be the second network for ground-based data collection.



3. Need to deploy some GNSS & seismic stations in the Lake Kivu basin to follow the rift movement, as it frequently initiate eruptions at Nyiragongo and Nyamulagira volcanoes, for seismic and landslide hazards assesment, and reduce the associated disaster risks.



Field of active volcanoes

Rift movement

Tectonic map of the Virunga Lake Kivu basin (Pouclet et al., 2016)

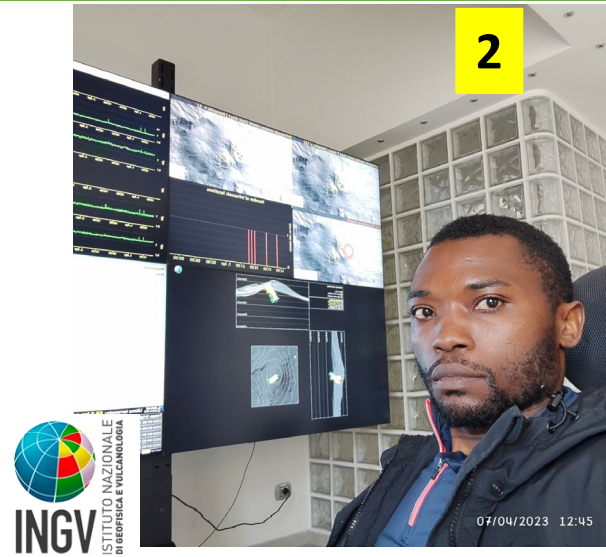
3. The VDAP has donated a West Systems Portable Fluxmeter. This equipment allows the measurement of CO₂ and H₂S fluxes from both the soil and Lake Kivu. It is used for the monitoring of Nyiragongo volcano, and the assessment of CO₂ and H₂S hazards in the mazuku



2. Training of local scientists



Albert Kyambikwa, a GVO junior researcher is attending the last year of a masters in volcanology at University at Buffalo Funded by University of Buffalo



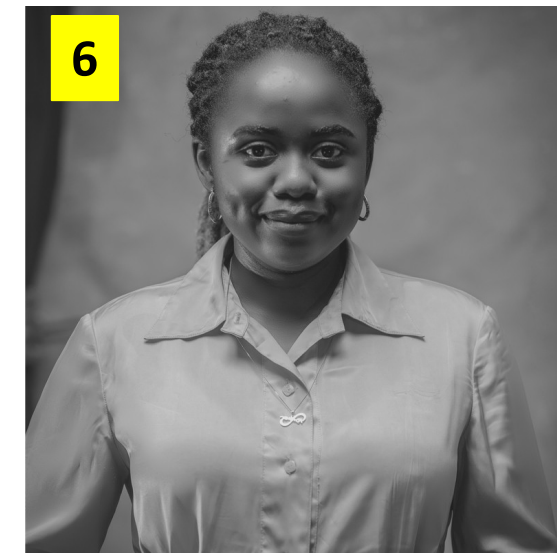
Arsène Sadiki, a GVO junior researcher is having 1,5 years training in seismology at INGV Catania, Funded by ICTP



Marcellin Kasereka, a GVO junior researcher is having 2 years masters in analytical chemistry at University of Burundi



Olivier Munguiko (4) a GVO junior researcher and Titus Habiyakare (5) a seismologist from Rwanda, will attend the CSAV courses in Hawaii from June to August. Funded by USGS-VDAP



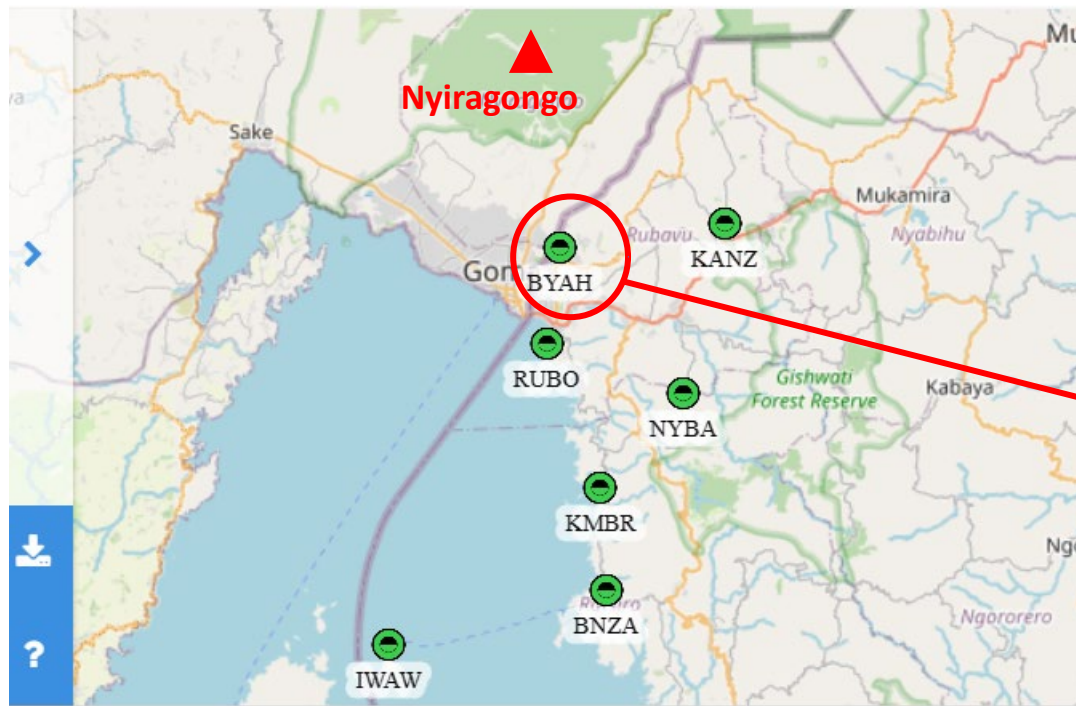
MOSANGE Thérèse from University of Goma is having a 2 years masters in Environmental Sciences at Abomey Calavi University (Benin), with a scholarship from Abomey Calavi

The USGS-VDAP has funded a remote training of GVO scientists on the use of a West Systems Portable Fluxmeter they donate to GVO, the training also included data processing and interpretation



3. DATA OPEN ACCESS: 7 GNSS stations in Rwanda are open, part of the UNAVCO network

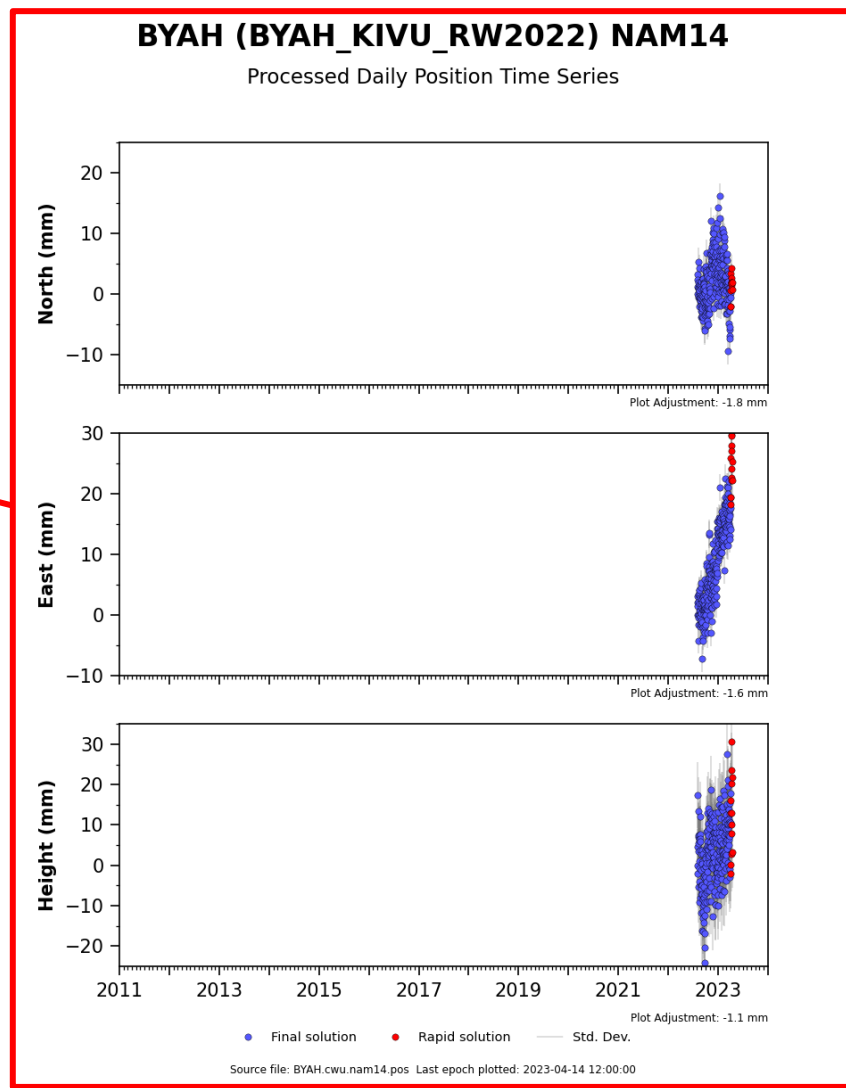
UNAVCO NETWORK MONITORING - 1890 STATIONS DISPLAYED



Filter...

Localization Status

Site Networks Classification Statio...



Near Future Goals

4. DISSEMINATION AND OUTREACH : A WEBSITE FOR VIRUNGA SUPERSITE

We need a website for :

- upload all materials the supersite has produced so that the population can access it (e.g. hazards maps)
- Translate these materials in French, Swahili for a better dissemination
- Dissemination of Geohazards-related scientific results produced by local scientists so it can reach the population
- Space to promote OPEN DATA: indicate the data which is open in the region (e.g. GNSS data in Rwanda), EO data, published results,...
- Visibility for local scientists and their research activities

5. 1. Organize online and onsite training on EO Data processing
2. Organize onsite first meeting of local scientists in the field of Geohazards

Thanks for your attention