

NYIRAGONGO VOLCAN

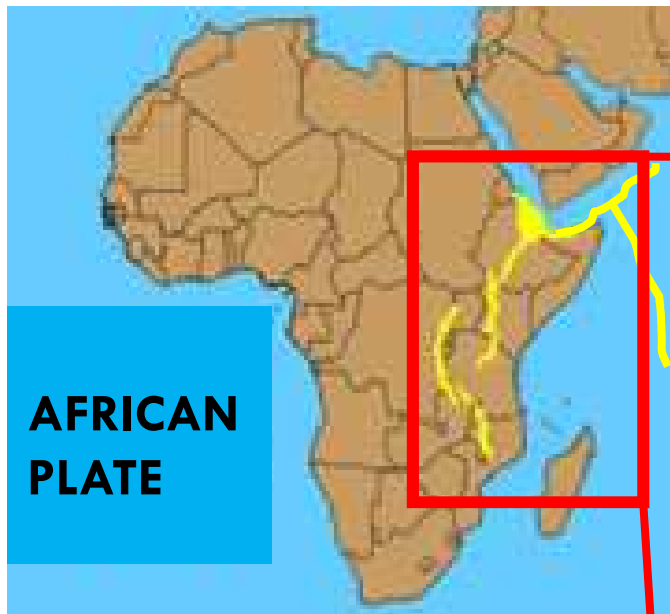
AN UNUSUAL TOURISTIC OPPORTUNITY

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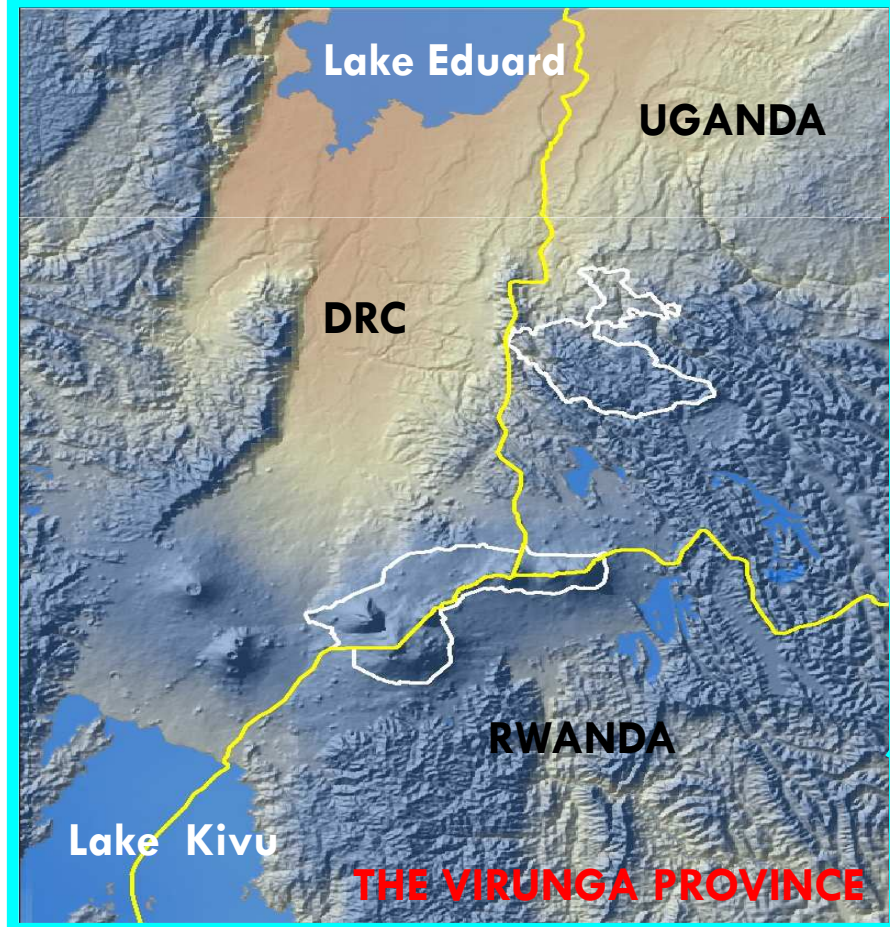
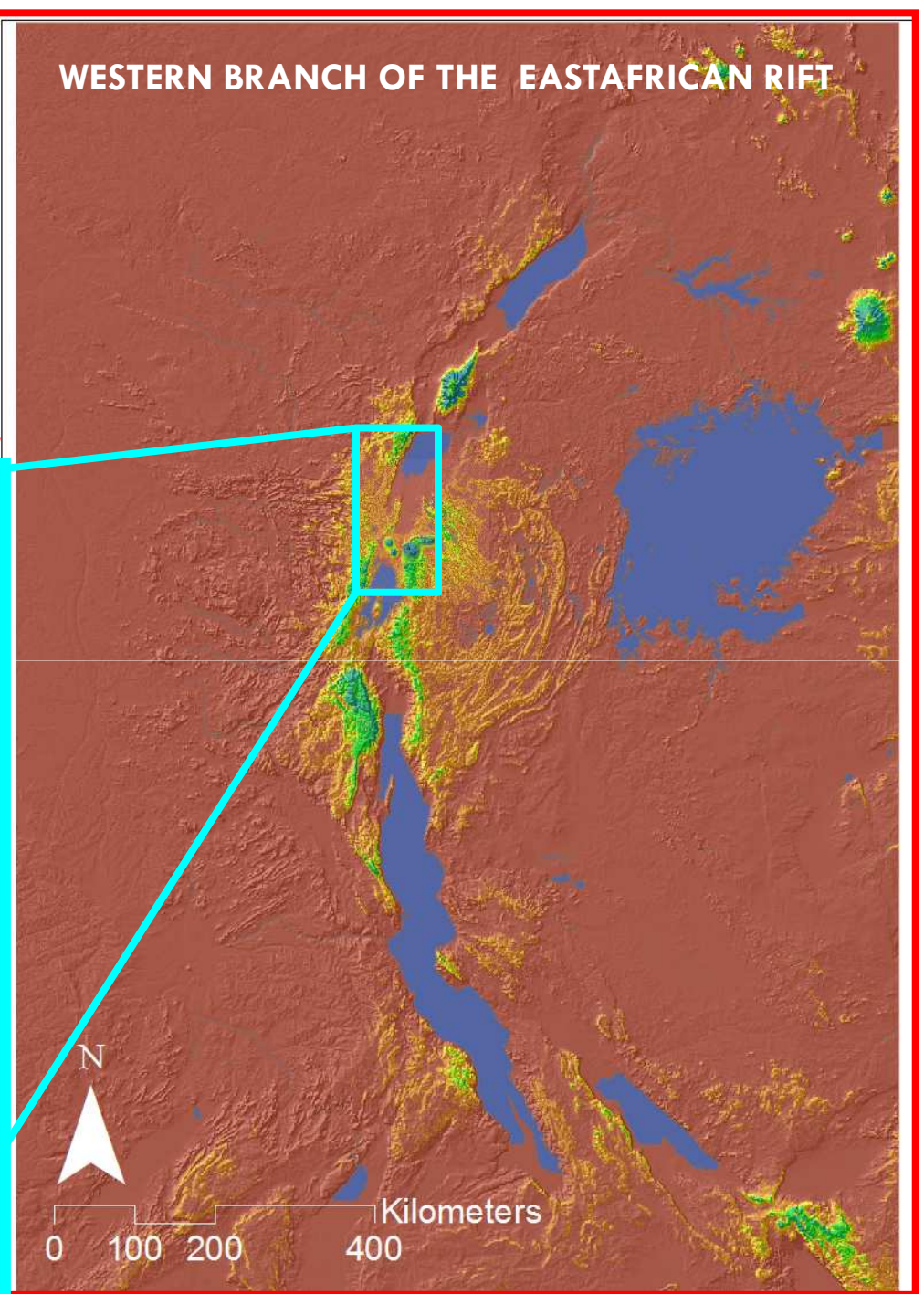
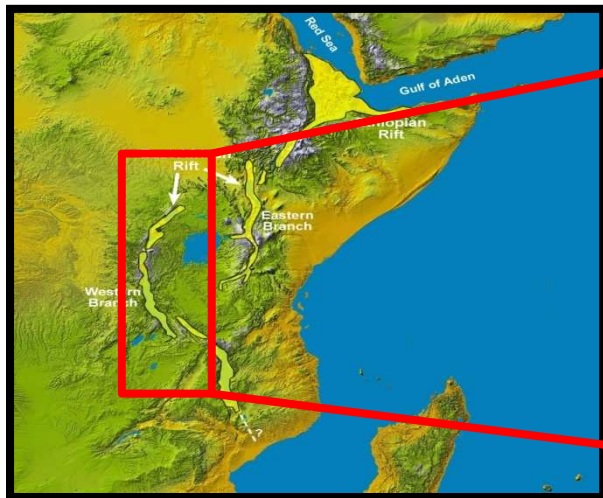
1. The Western branch of the East African Rift and the Virunga Province

The East African Rift (EAR) is an approximately **6,000 X 30 km** large that runs from the Gulf of Aden to central Mozambique in East Africa.

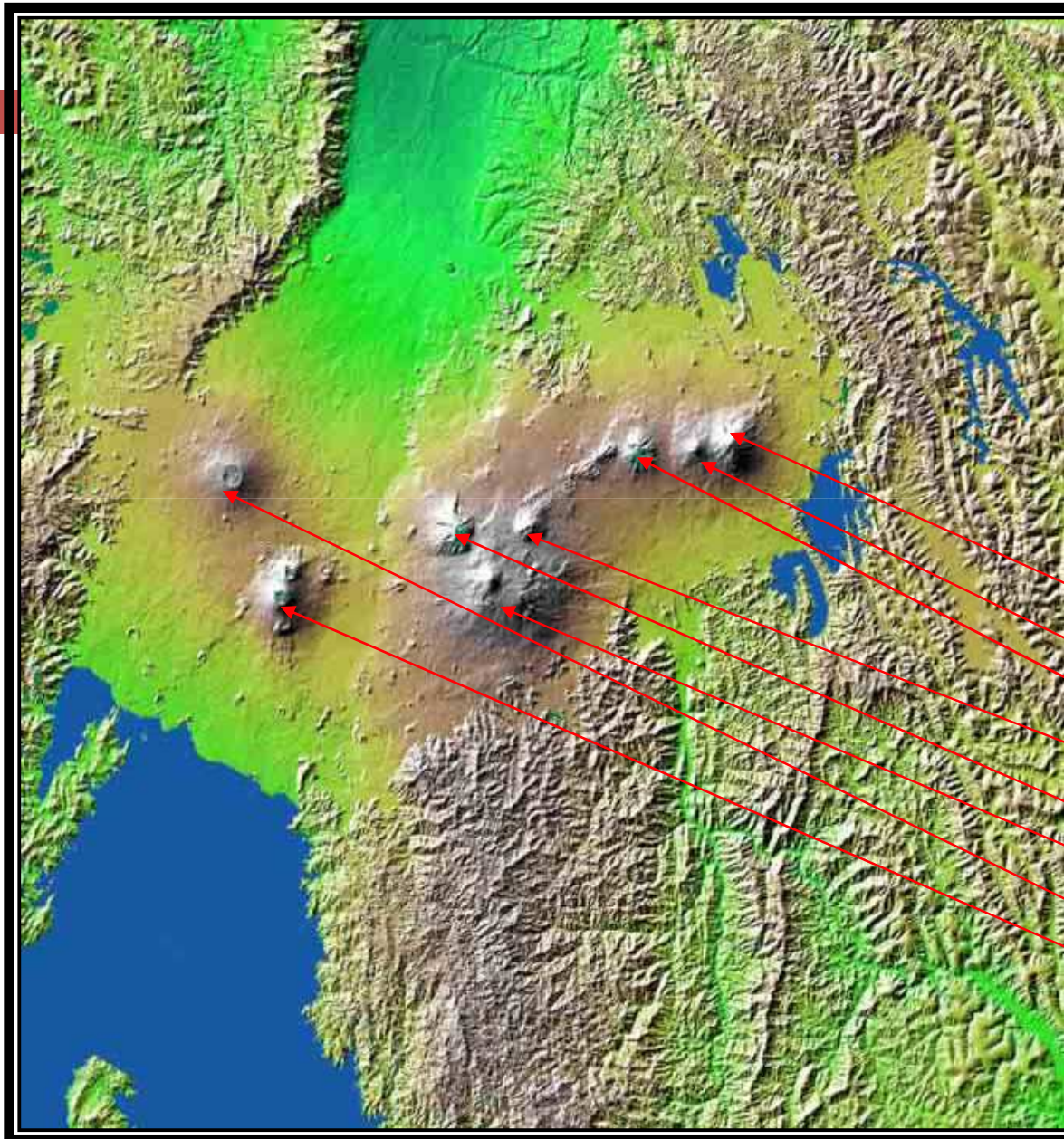
From the Ethiopia-Kenyan borders, it divides into two: the **Western** and the **Eastern branches**.

It is one of the geologic wonders of the world, a place where the earth's tectonic forces are presently trying to create new plates by splitting apart old ones.



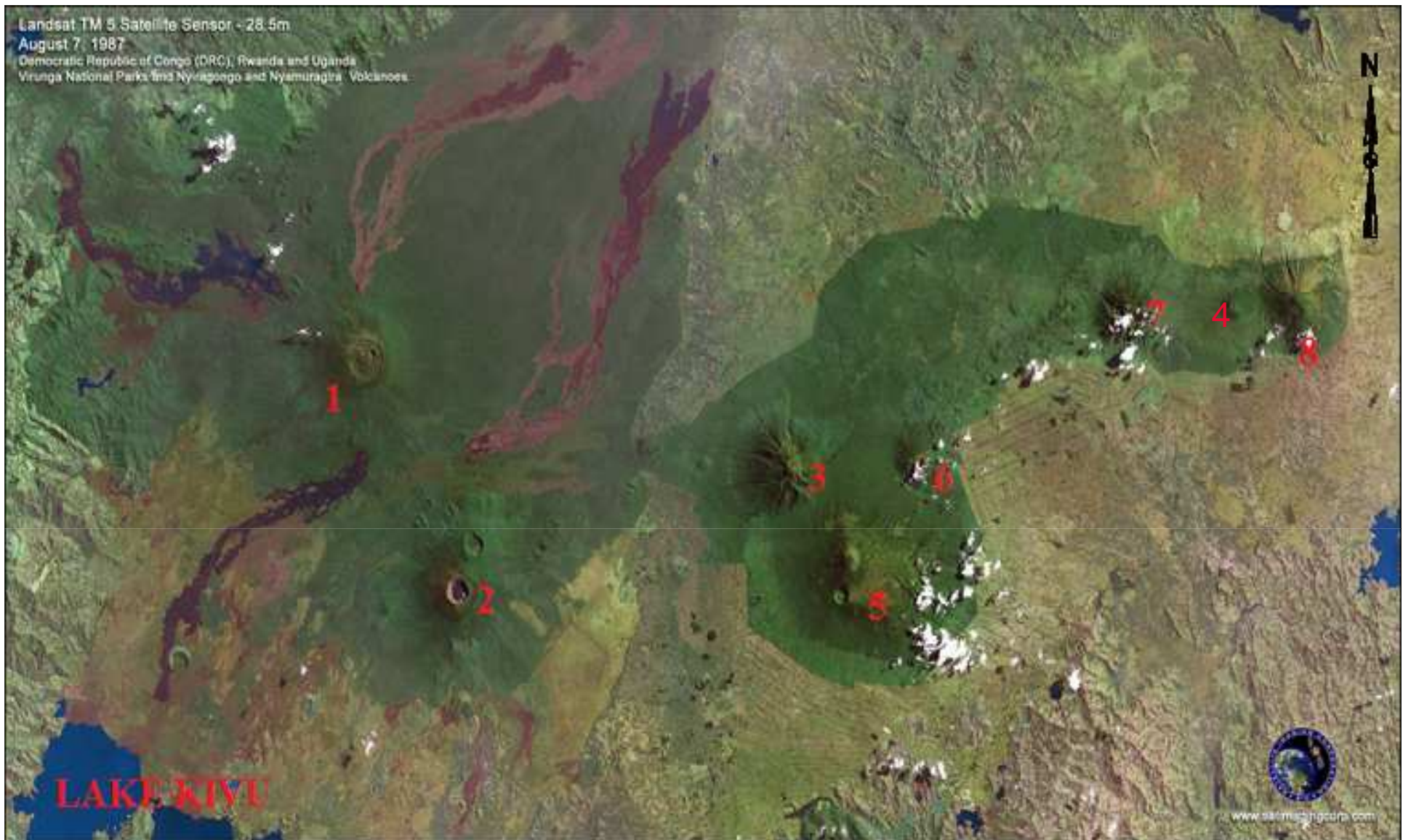


Virunga Volcanoes



The virunga volcanic province has 8 major volcanoes, only 2 still active.

Muhabura
Gahinga
Sabinyo
Visoke
Mikeno
Karisimbi
Nyamulagira (active !)
Nyiragongo (active !)



- | | |
|--|--|
| 1. Nyamulagira (3056m/ RDC) | 2. Nyiragongo (3470m/ RDC) |
| 3. Mikeno (4437 m m/DRC). | 4. Gahinga (3474 /Rwanda-Uganda) |
| 5. Karisimbi (4506/ RDC-Rwanda) , | 6. Visoke (3911m/ Rw-DRC), |
| 7. Sabinyo (3647m/RDC-Rw-Ug), | 8. Muhabura (4127m/Rwanda-Ouganda), |

(West)

(East)

Virunga Volcanic Group Viewed from Goma Volcano Observatory
(DR Congo)

Is the only shield volcano of the groupe

Nyamulagira
(3056m)

Nyiragongo
(3470m)

Mikeno
(4437m)

Karisimbi
(4506)

Photo: Charles Balagizi
Goma Volcano Observatory
balagizi.Charles@gmail.com

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(West)

(East)

Virunga Volcanic Group Viewed from Lake Kivu
(DR Congo)

Nyamulagira
(3056m)

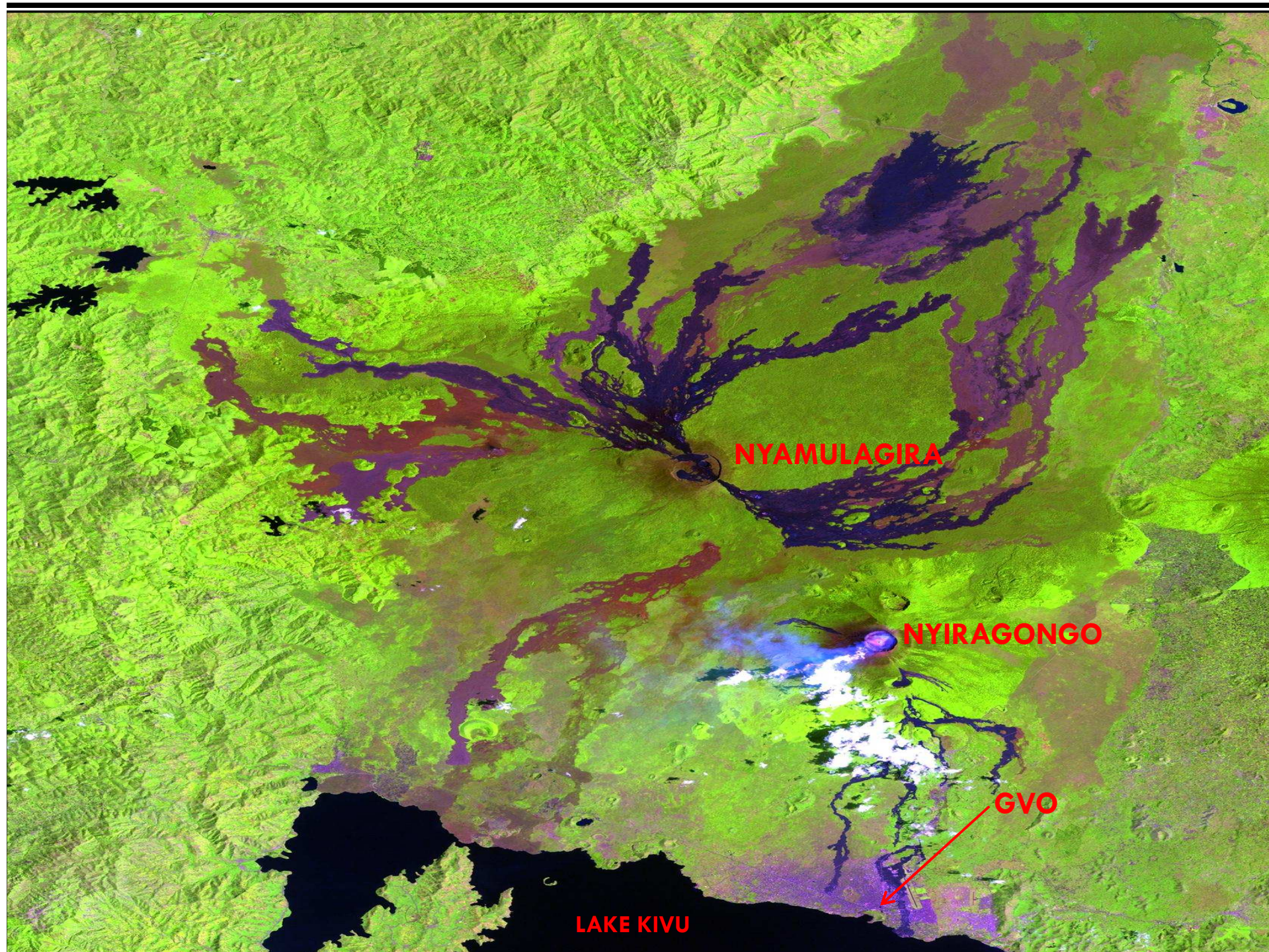
Nyiragongo
(3470m)

Mikeno
(4437m)

Karisimbi
(4506m)

Photo: Charles Balagizi
Goma Volcano Observatory
balagizi.Charles@gmail.com

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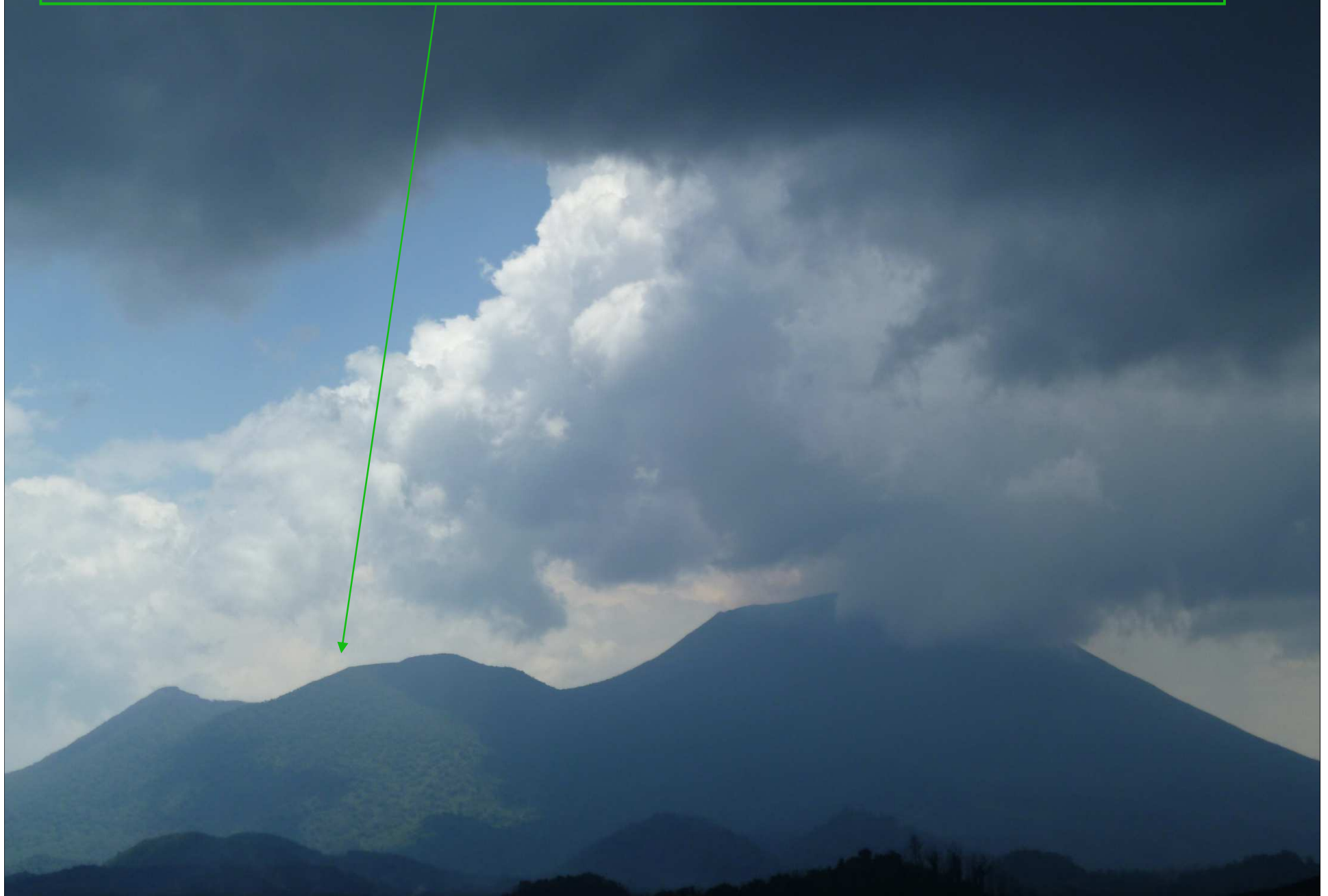
Basic Informations

- Nyiragongo means “**which smokes**”
- Coordinates: 1.52° S and 29.25° E,
- Elevation : **3470 meters**
- Discovered in ~ **1894** by the Germany explorer **Gustav Adolf von Götzen**.
- Age: **+/- 15000 years old**.
- The volcano partly overlaps with two older secondary crater , **Baratu (3000m)** and **Shaheru (2700 m)** , and is also surrounded by **hundreds of small volcanic cinder cones from flank eruptions**.
- The main crater is about **(1.5 – 1.8) kilometers wide** .
- The crater has **3 platforms** , the lava lake is found in the bottom of this.
- It is located inside Virunga National Park, in the Democratic Republic of the Congo, about **20 km north** of the town of Goma and Lake Kivu and just west of the border with Rwanda.
- Not much is known about how long the volcano has been erupting, but since 1894 it has erupted two times: **on January 10, 1977 and on January 2002**.

NYIRAGONGO VOLCANO



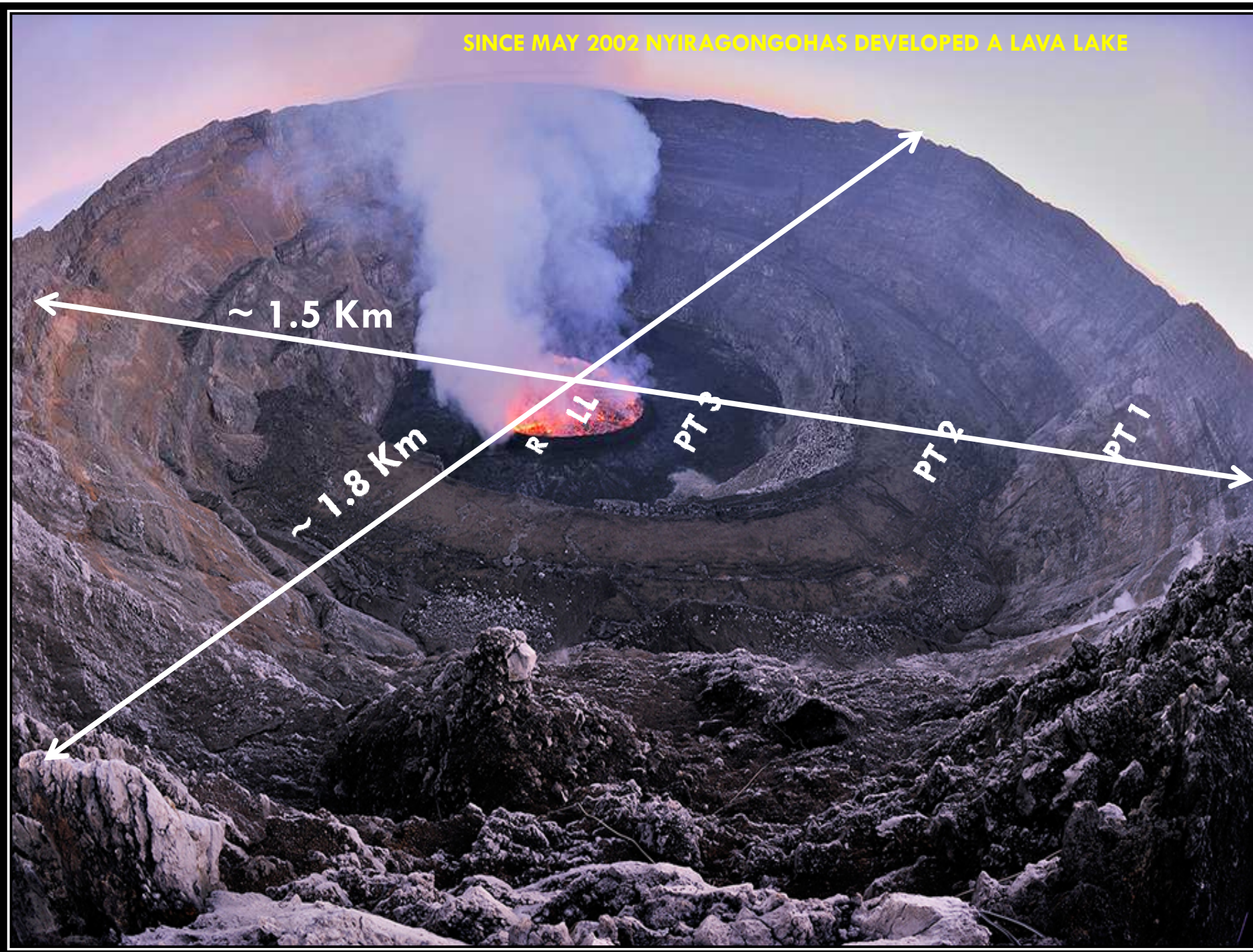
The Baruta crater (3000m)

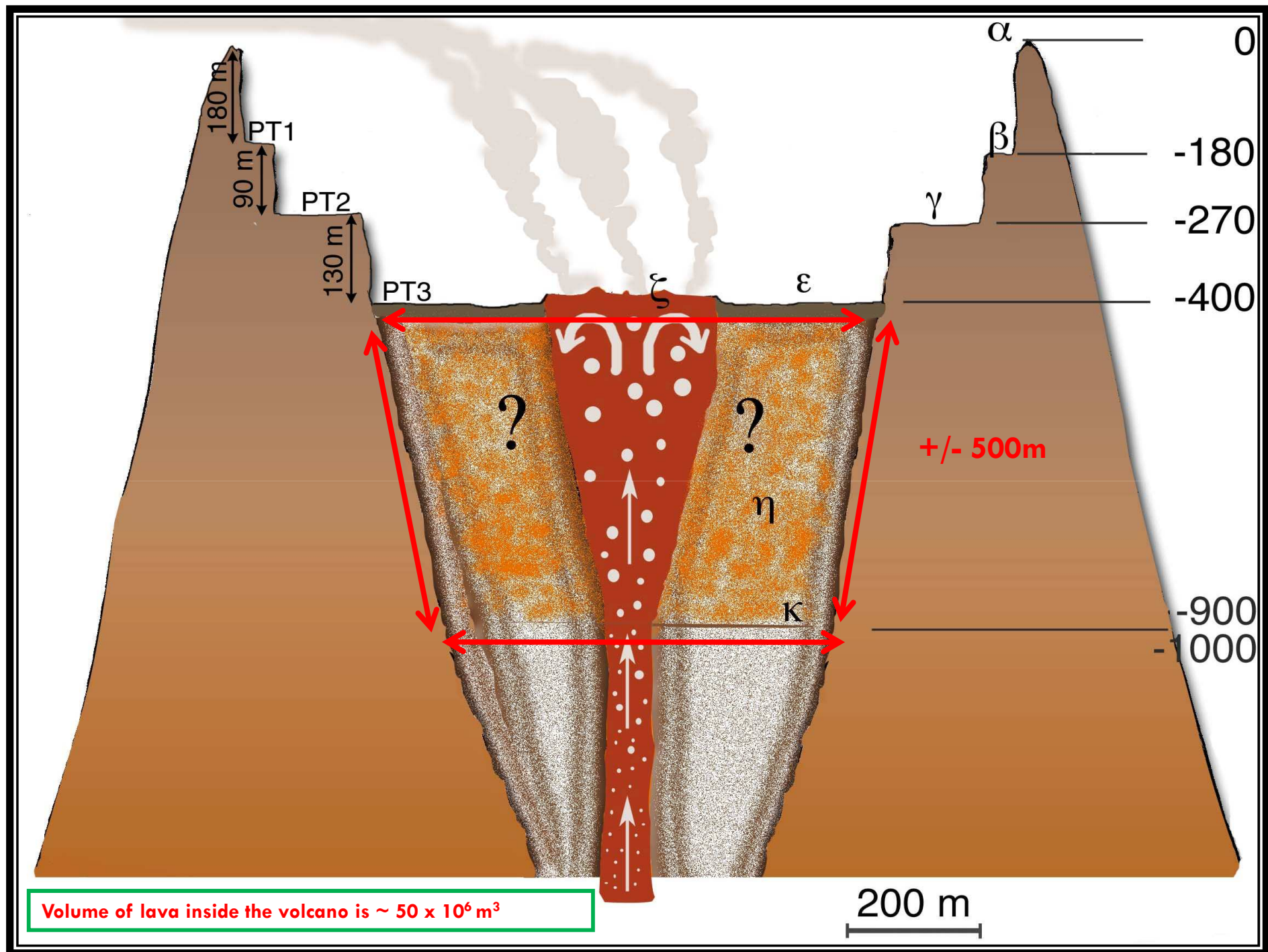


Shaheru Crater (2700m)

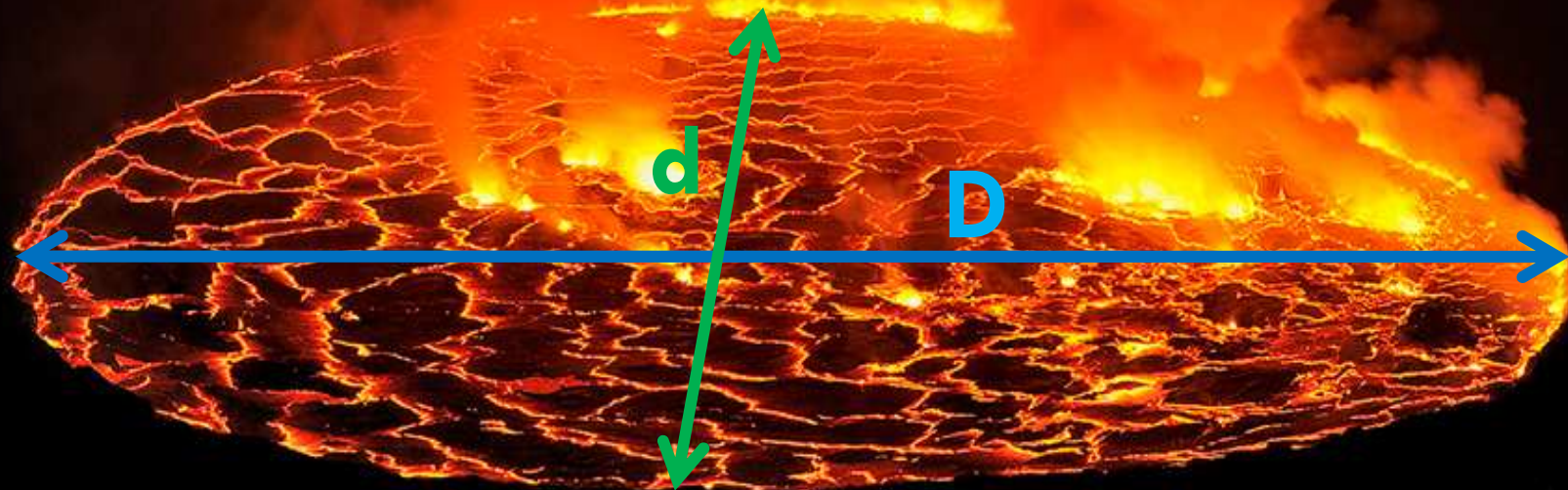


SINCE MAY 2002 NYIRAGONGO HAS DEVELOPED A LAVA LAKE



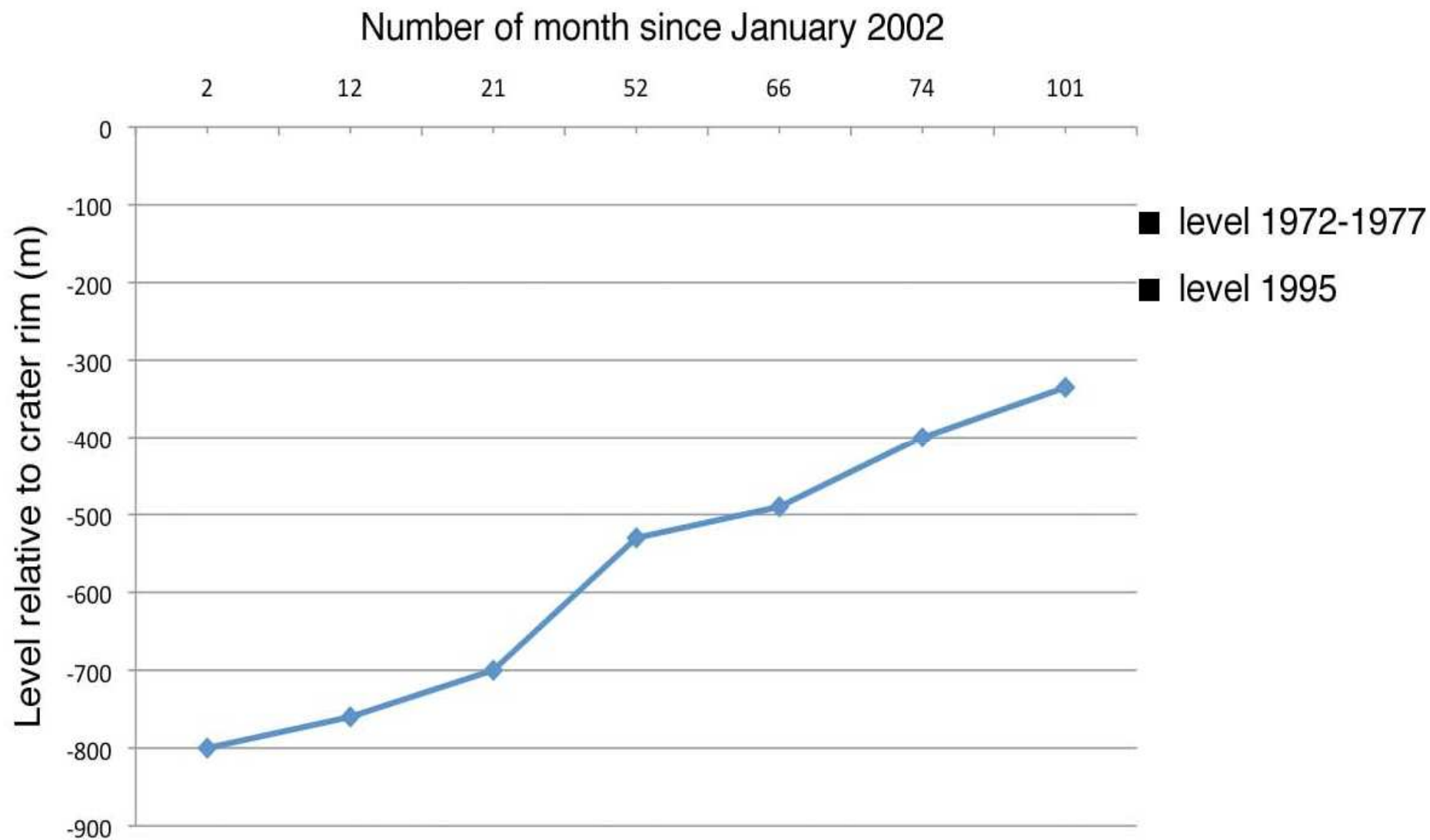


Size of Nyiragongo's lava lake,
The largest Worldwide.



D= E-W axis is ~ 230 m wide
d= S-N axis to be ~ 220 m

The lava lake surface area is $\sim 40,000 \text{ m}^2$
= 5 soccer football field



Changes in the lava lake level since January 2002

Present and Future advantages due to volcanism in the Virunga Volcanic Province.



1. Soil Fertilization

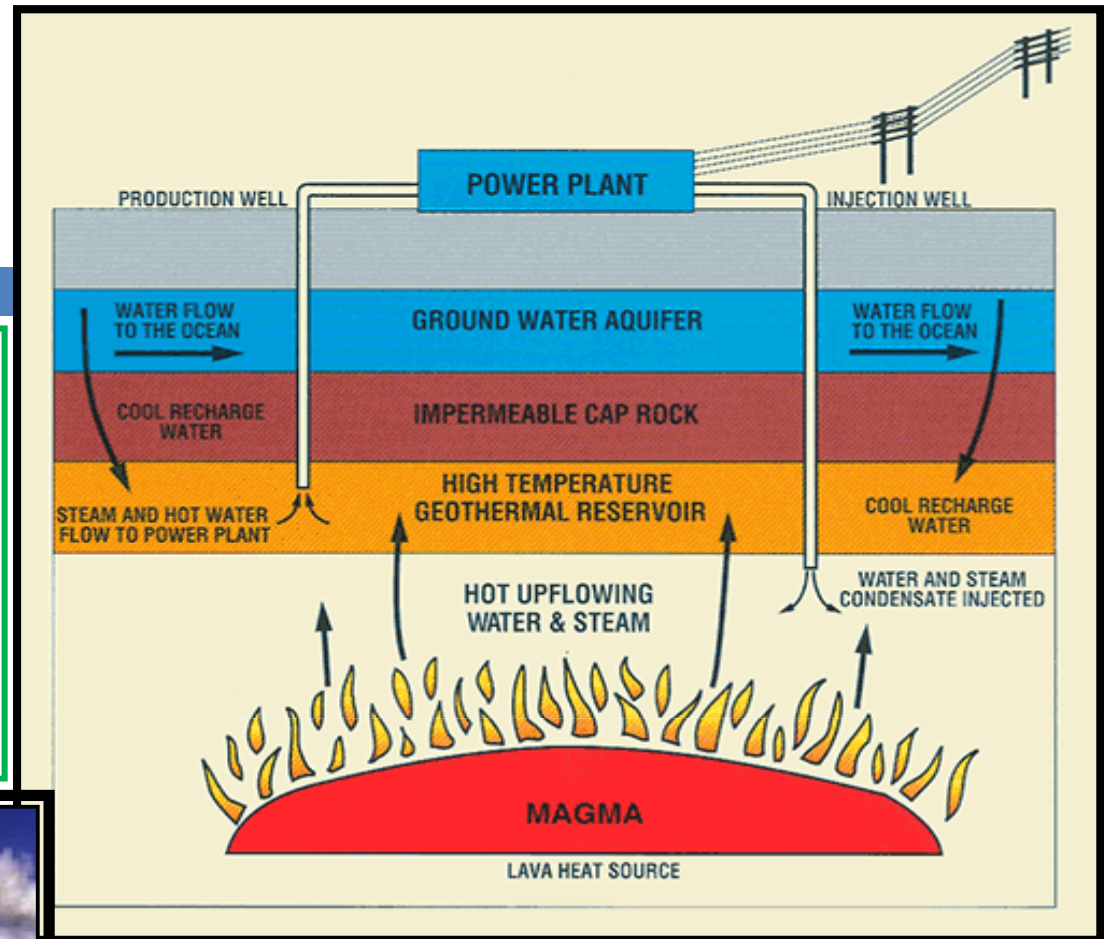
The lands of volcanic origin are fertile.



Farmers get up to 3 crops a year because the ash released by volcanoes are rich in nutrients and a macro climate due to volcanoes allows plants grow in dry season in the Virunga Volcanic Province.

2. Geothermal

Geothermal energy is a top source of renewable energy, better than solar or wind. When the wind doesn't blow and the sun doesn't shine, the heat from the volcano continues to produce a steady flow of power.



The technology is ready in use in many countries such as Hawaii and Iceland.

3. Building and Art

Even the rocks from volcanoes are of great value in Building and art :

- ❖ Light walls, and sound proofing are built using a mixture of lapilli and cement, this is called pozzolana.
- ❖ Olivine is a semi-precious stone used in jewelry as the peridot. Its name is due to its olive green.
- ❖ In Goma, the artists use the 'lava stones' as raw material to shape and mold materials of art.