

Deforestation in Krokosua Forest Reserve

Solomon Appekey & Lazar Jeftic

Krokosua Forest Reserve

Krokosua (Hills) Forest Reserve is located in the southwestern part of Ghana. The reserve was established in 1935 and has an area of 481 kilometre square. This forest have been known to host between 300 and 500 chimpanzees as confirmed by hunters and field surveys around the site (Magnuson, 2002; Oates, 2006; Danquah et al., 2012 and Tehoda et al., 2017).

Probing deforestation with satellite data

Since 1995, the reserve has become a target of intense deforestation (Oates, 2006). In the new edited satellite images (visible and color-infrared) from the Copernicus Sentinel-2 mission, we see evidence of heavy deforestation in this forest reserve.

In the first Sentinel-2 RGB image (satellite image in the visible spectrum) from 24.01.2022, we see the forest reserve marked with red polygon before the tree logging activities. Take note of the structures in the middle of the image.

In the second Sentinel-2 RGB image from 03.02.2023., we see very clearly the patterns of deforestation, especially in the middle of the image. These patterns reveal the bare earth (surface without the trees).

The third image is a color-infrared Sentinel-2 NRG image from 03.02.2023 near the Nkwanta town. The portions without any vegetation (bare ground) are seen in shades of cyan color on the map with artificial objects also visible (for eg. road from Nkwanta through the forest reserve). In general, we see evidence of heavily logged areas in the reserve.

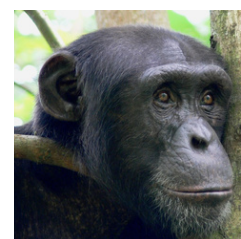
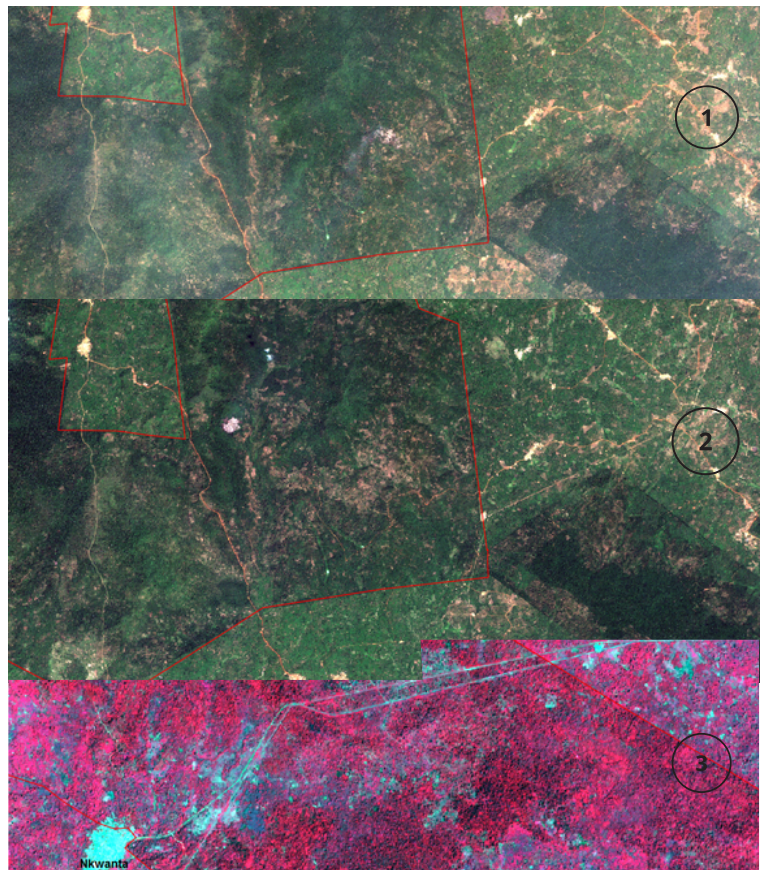
Endangered species in the Krokosua Forest Reserve

A study by Tehoda et al., 2017 have found 14 nests, 2 feeding spots and 1 footprint of chimpanzees in the Krokosua Forest Reserve. Human activities have also been confirmed in the form of the presence of Cartridge cases (36), snare (126), Gunshot (2), Logging (3) and others (21) in the reserve (Tehoda et al., 2017).

It is clear that the population of chimpanzees in the reserve has dwindled due to deforestation and poaching activities.

Obviously, these chimpanzees are endangered and need to be protected as soon as possible.

This work contains modified Copernicus Sentinel data: 2022–2023.



References

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4. Tehoda P, Vendras E, Welsh A, Arandjelovic M, Boesch C, Kuehl HS, Danquah E (2017) First Photographic Records Of Ghana's Elusive Chimpanzee And Its Conservation Status. Inaugural Congress of the African Primatological Society (Bingerville, Ivory Coast).