

06 March 2023



TROPICAL CYCLONE JUDY AND KEVIN, PRELIMINARY SATELLITE-DERIVED DAMAGE ASSESSMENT IN VANUATU



VANUATU

Efate Island - Shefa Province

Erromango, Tanna & Aniwa Islands -Tafea Province

Espiritu Santo Island - Sanma Province

Malakula Island - Malampa Province

 Status: Impact on structures observed

 Further action(s): Continue monitoring



VANUATU



-  Area of interest
-  Province boundary

AOI 1 PORT VILA, EFATE ISLAND - SHEFA PROVINCE

Widespread damaged structures observed



Damaged structures



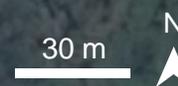
Damaged structures



Damaged structure



Damaged structures



AOI 1 PORT VILA, EFATE ISLAND - SHEFA PROVINCE

Widespread damaged structures observed



Damaged structures



Damaged structures



Damaged structure

Debris

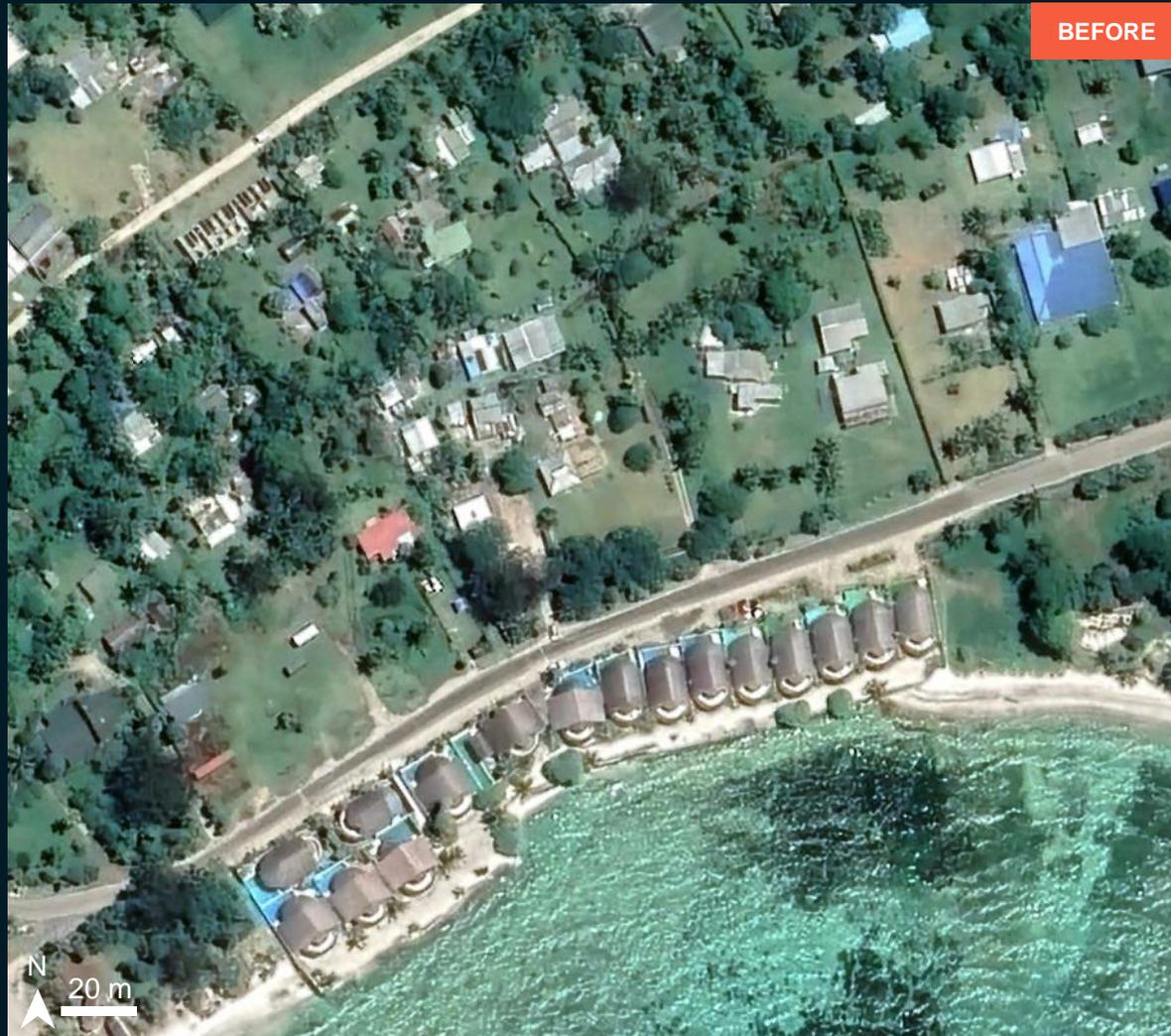


AOI 1 PORT VILA, EFATE ISLAND - SHEFA PROVINCE

Image center:
168°17'33.137"E
17°46'31.307"S



Widespread damaged structures observed



WorldView / 1 November 2022



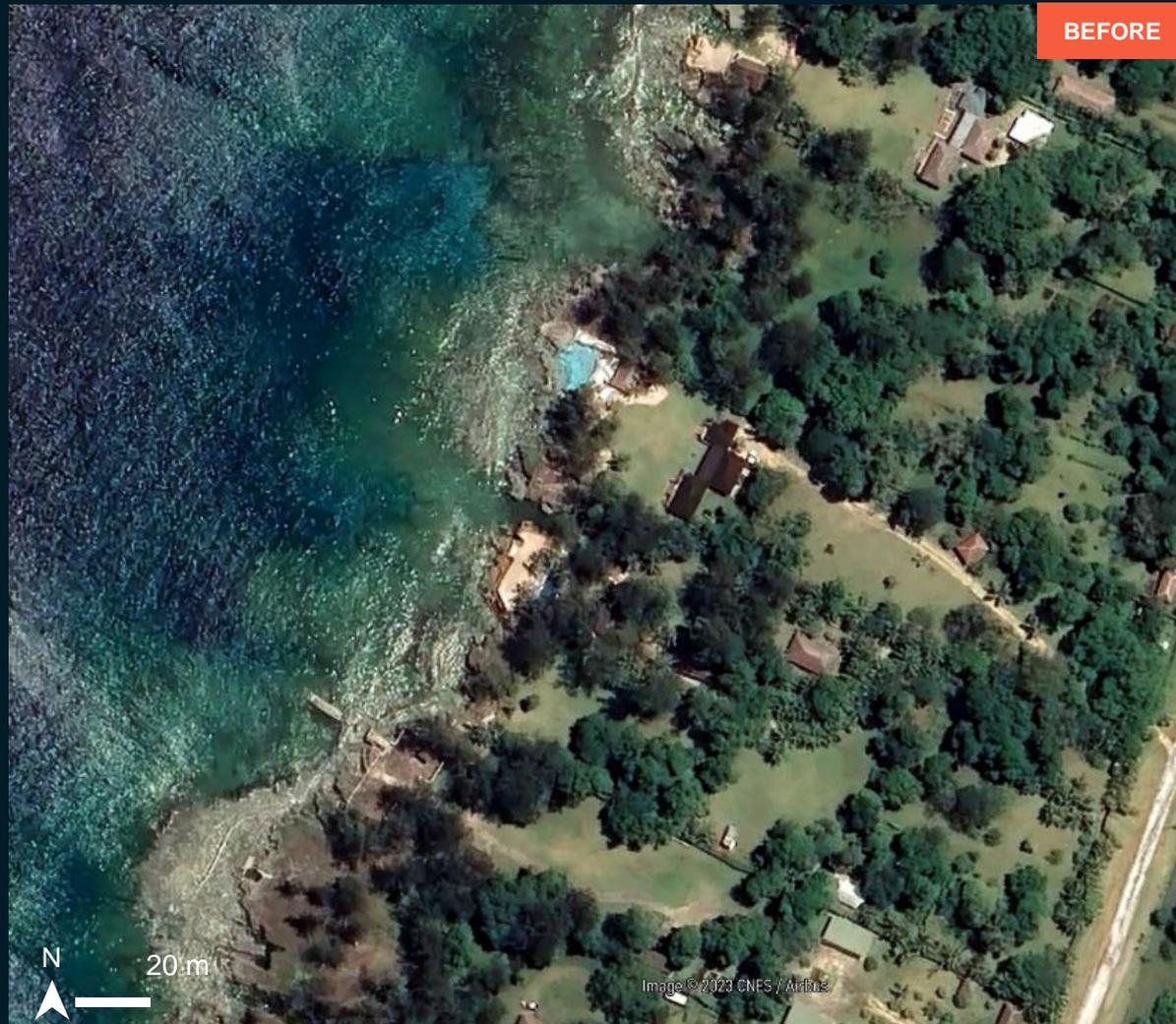
Pleiades / 4 March 2023

AOI 1 PORT VILA, EFATE ISLAND - SHEFA PROVINCE

Image center:
168°10'25.178"E
17°43'24.173"S



Potentially damaged structures by the storm surge



WorldView / 1 November 2022



Pleiades / 4 March 2023

AOI 2 UNPONGKOR VILLAGE, ERROMANGO ISLAND - TAFEA PROVINCE

Damaged structures observed



Williams River

30 m

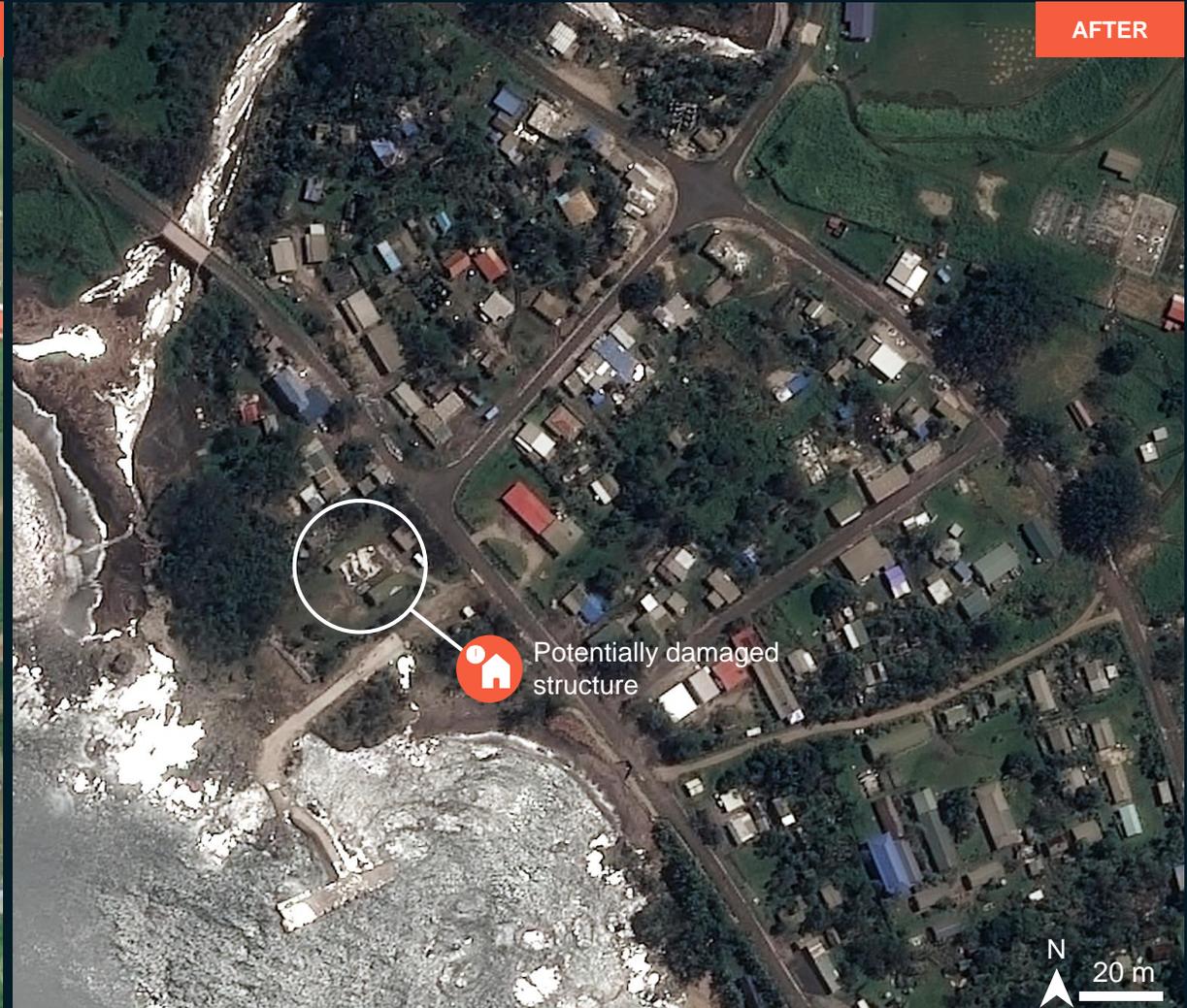


AOI 3 LENAHEL VILLAGE, TANNA ISLAND - TAFEA PROVINCE

Image center:
168°17'33.137"E
17°46'31.307"S



Potentially damaged structures observed



WorldView / 12 December 2022

Pleiades / 4 March 2023

AOI 3 LOWANATOM VILLAGE, TANNA ISLAND - TAFEA PROVINCE

Image center:
169°14'47.431"E
19°30'16.697"S

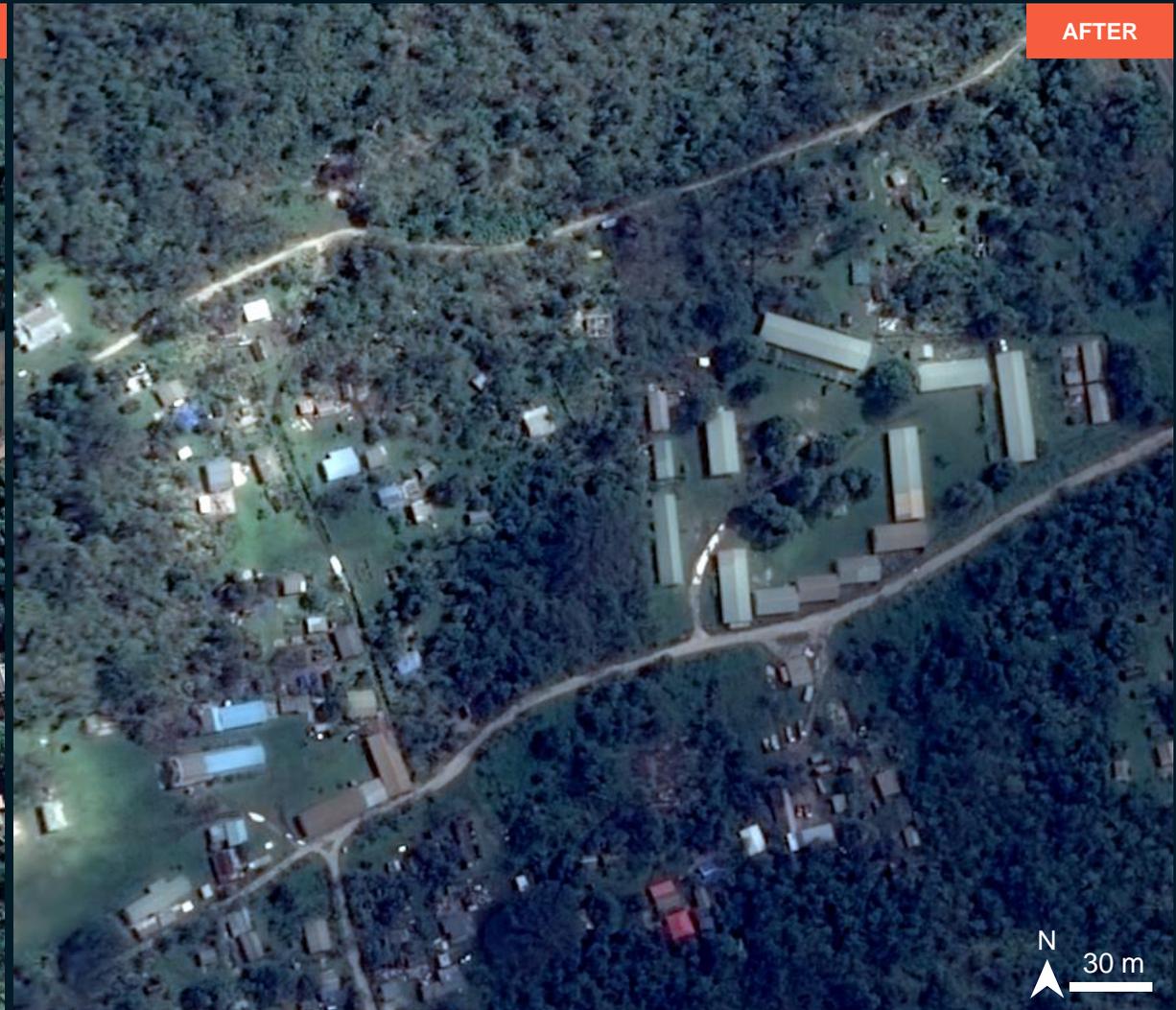


No visible damage observed



BEFORE

WorldView / 4 August 2021



AFTER

Pleiades / 4 March 2023

AOI 3 LENUS VILLAGE, TANNA ISLAND - TAFEA PROVINCE

Image center:
169°14'25.261"E
19°29'48.019"S



Potentially damaged structures observed



WorldView / 4 August 2021



Pleiades / 4 March 2023

AOI 3 TANNA ISLAND - TAFEA PROVINCE

Potentially damaged structures observed



Potentially damaged structures



Potentially damaged structures



Potentially damaged structures



AOI 4 LUGANVILLE CITY, ESPIRITU SANTO ISLAND - SANMA PROVINCE

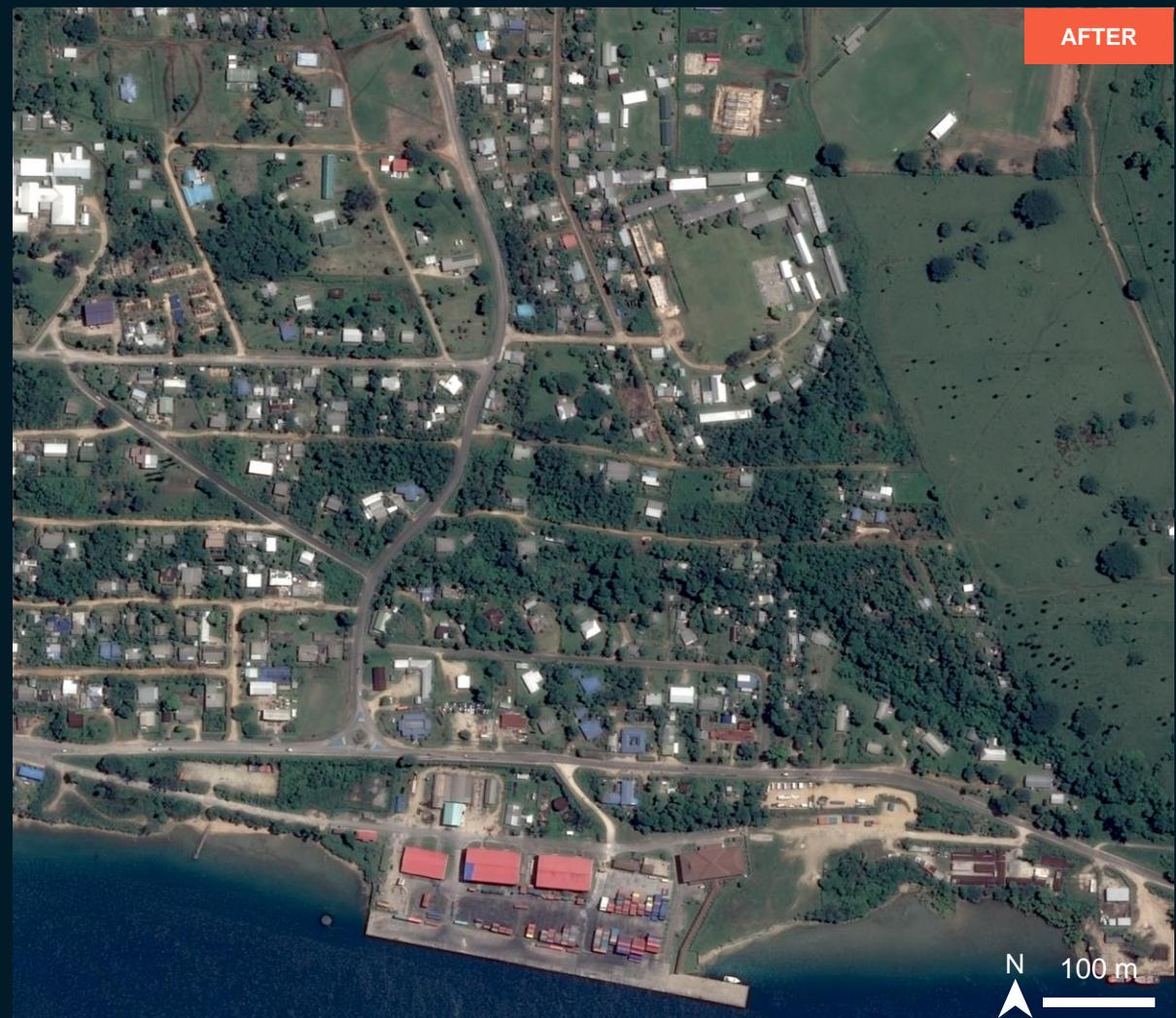
No visible damage observed

Image center:
167°11'21"E
15°30'43"S



BEFORE

WorldView-2 / 02 August 2021



AFTER

Pleiades / 4 March 2023

AOI 5 LITSLITS VILLAGE, MALAKULA ISLAND - MALAMPA PROVINCE

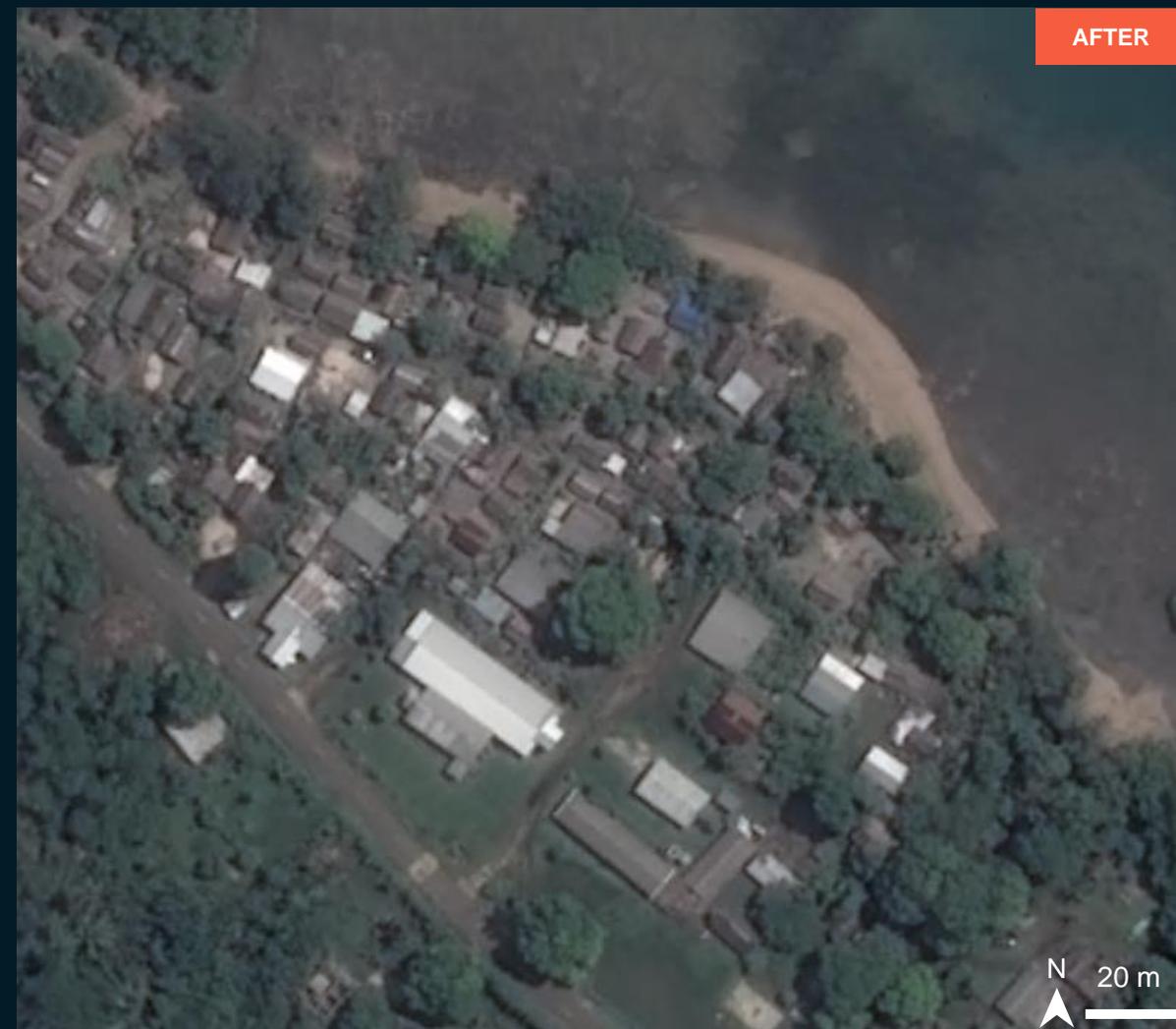
Image center:
167°26'16"E
16°16,45"S



No visible damage observed



WorldView / 19 January 2016

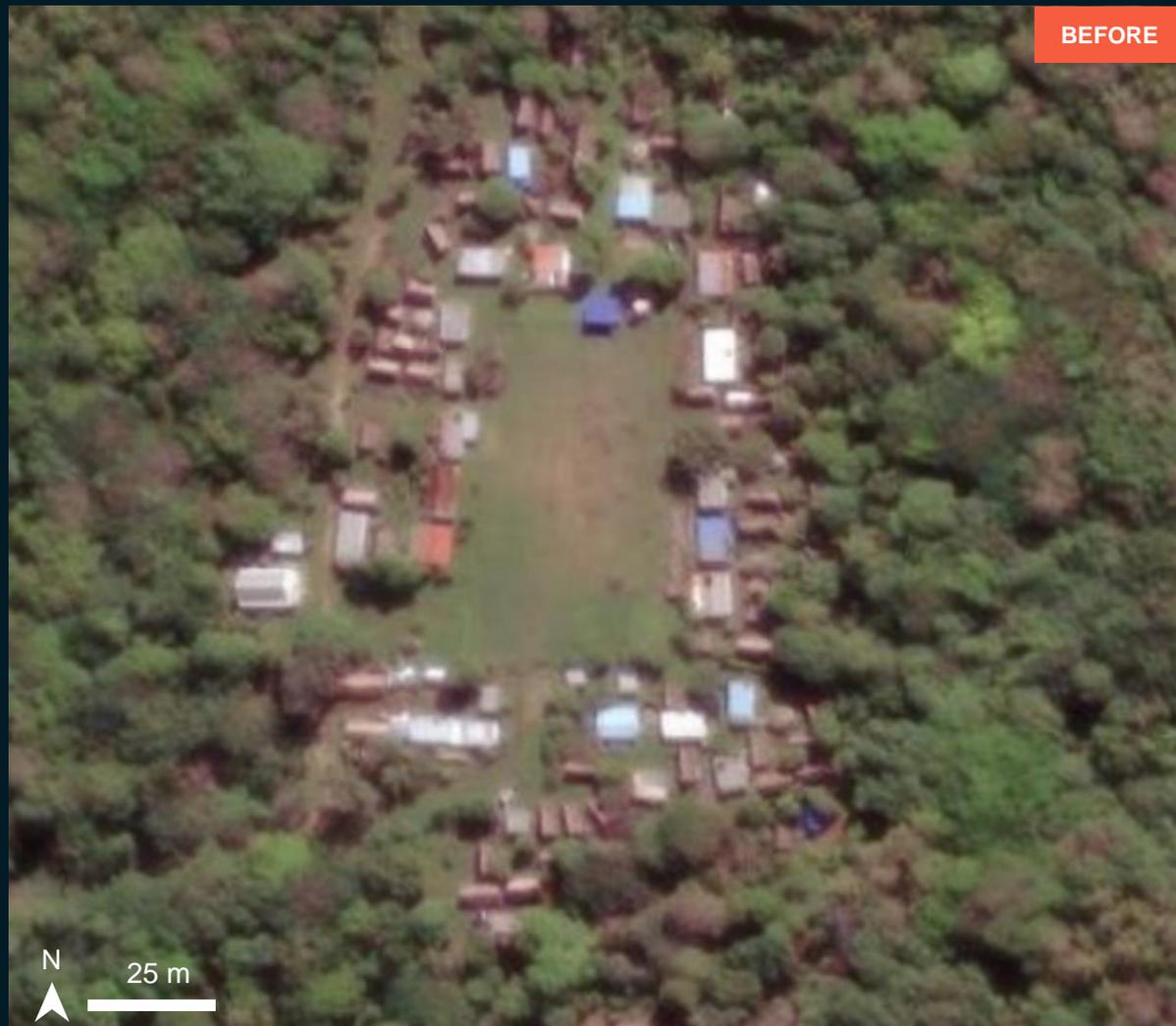


Pleiades / 4 March 2023

AOI 6 ISAVAI HAMLET, ANIWA ISLAND - TAFEA PROVINCE

Potentially damaged structures observed

Image center:
169°35'59"E
19°15'21"S



WorldView-2 / 11 July 2022



Pleiades / 4 March 2023

AOI 6 IFANGAWE HAMLET, ANIWA ISLAND, TAFEA PROVINCE

Damaged and potentially damaged structures observed

Image center:
169°36'00"E
19°15'58"S



WorldView-2 / 11 July 2022



Pleiades / 4 March 2023

SUMMARY OF FINDINGS

From the images acquired on 04th of March 2023, the findings are the following:

- Widespread damaged structures observed in Port Vila, Efate Island - Shefa Province;
- Potentially damaged structures by the storm surge observed along the western shoreline of Efate Island;
- Damaged structures observed in Unponkor village, Erromango Island - Tafea province
- Potentially damaged structures observed in Lenakel and Lenus villages;
- No visible damage observed in Lowanatom village on Tanna Island - Tafea province;
- No visible damage observed in Luganville city on Espiritu Santo Island - Sanma province and Litslits village on Malakula Island - Malampa province ;
- Damaged and potentially damaged structures observed in Ifangawe and Isavai hamlets on Aniwa Island - Tafea province.

COPYRIGHTS AND SOURCES

Data sources:

(1) Satellite Image (Post-event)

Pleiades: 04 March 2023

Resolution: 50 cm

Copyright: CNES (2023) Distribution Airbus D&S

Source: Airbus Defence and Space

(2) Satellite Image (Pre-event)

Worldview-2 : 13 July 2022

Resolution: 50 cm

Copyright: © DigitalGlobe, Inc. (2022)

Source: USGS / HDDS

(3) Ancillary data

Administrative boundaries: PopGIS2: Secretarial of the Pacific Community (SPC), Statistics for Development Division

Analysis: United Nations Satellite Centre (UNOSAT)

Production: United Nations Satellite Centre (UNOSAT)

NOTE: This is a preliminary analysis and has not yet been validated in the field.

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