

13 March 2023




Tropical Cyclones Judy And Kevin, Preliminary Satellite-derived Assessment In Vanuatu



VANUATU

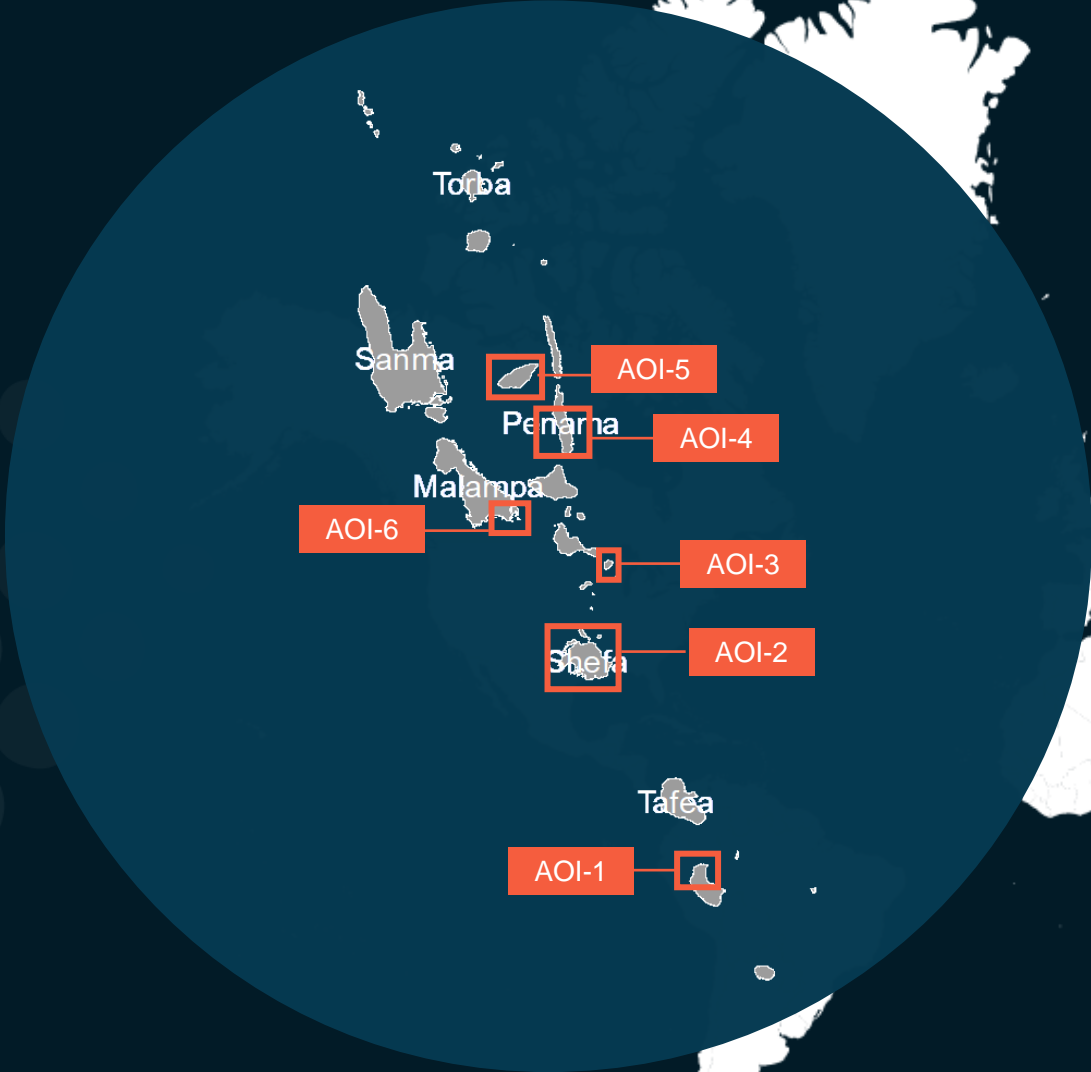
Penama, Malampa, Shefa, and Tefea Provinces



 Status: Landslide, potentially affected road and damaged houses observed.

 Further action(s): Continue monitoring



VANUATU



-  Area of interest
-  Province boundary

AOI 1 TANNA ISLAND, TAFEA PROVINCE

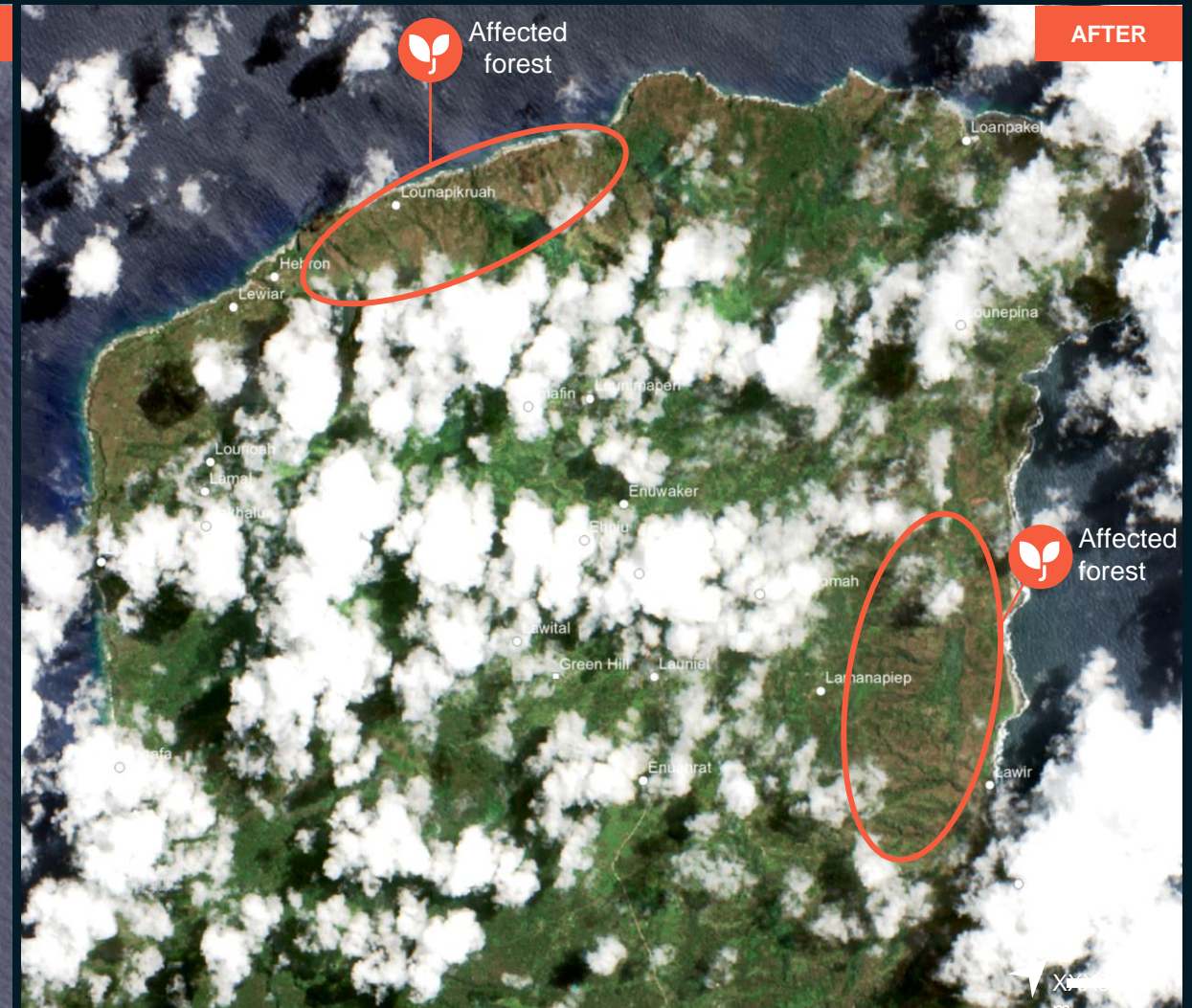
Image center:
169°18'4"E
19°21'47"S



Affected forest



Sentinel-2 / 14 February 2023



Sentinel-2 / 11 March 2023

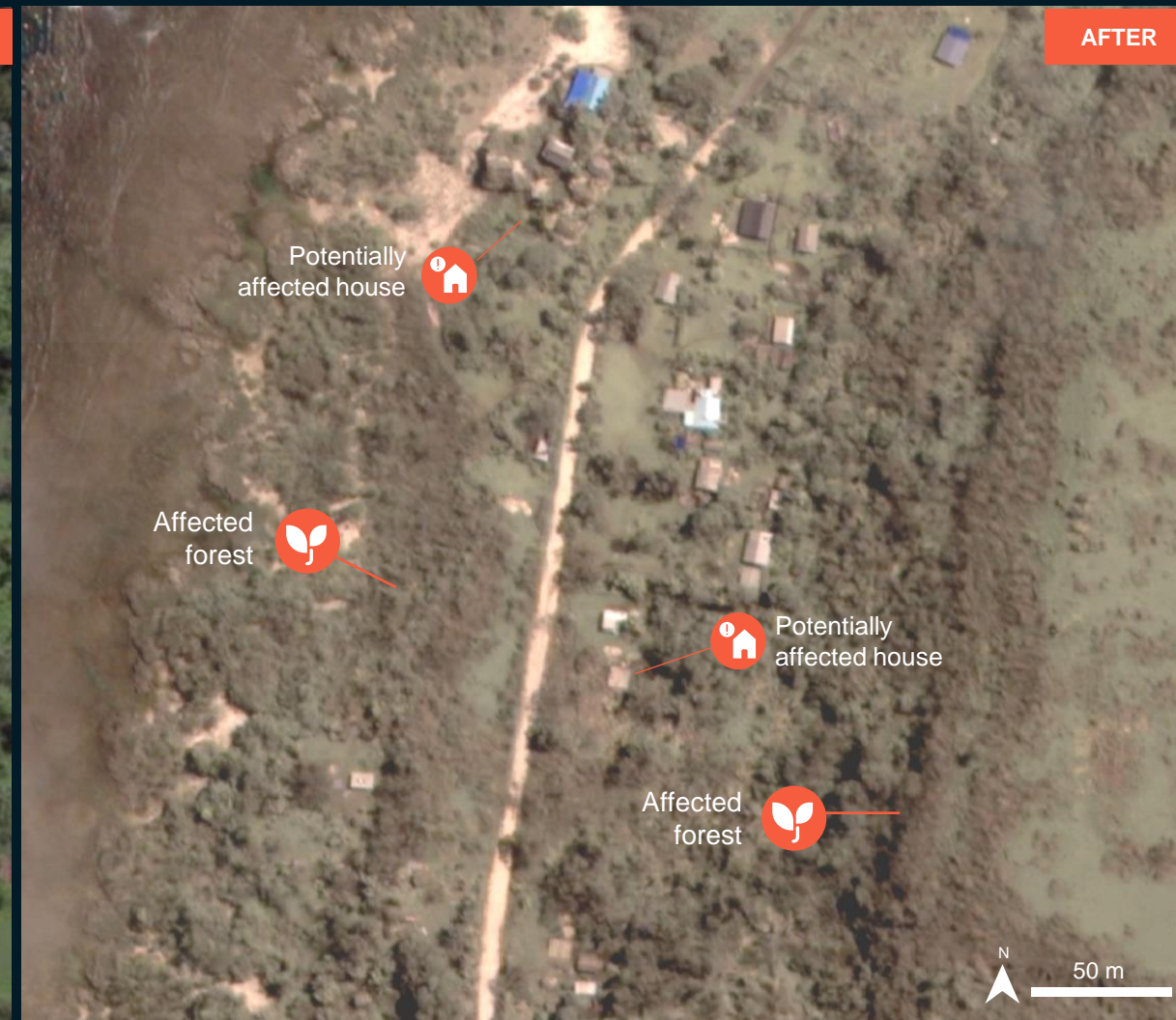
AOI 1-1 TANNA ISLAND, WEST TANNA COUNCIL, TAFEA PROVINCE

Affected forest and potentially affected houses

Image center:
169°13'36"E
19°26'7"S



WorldView-3 / 25 June 2022

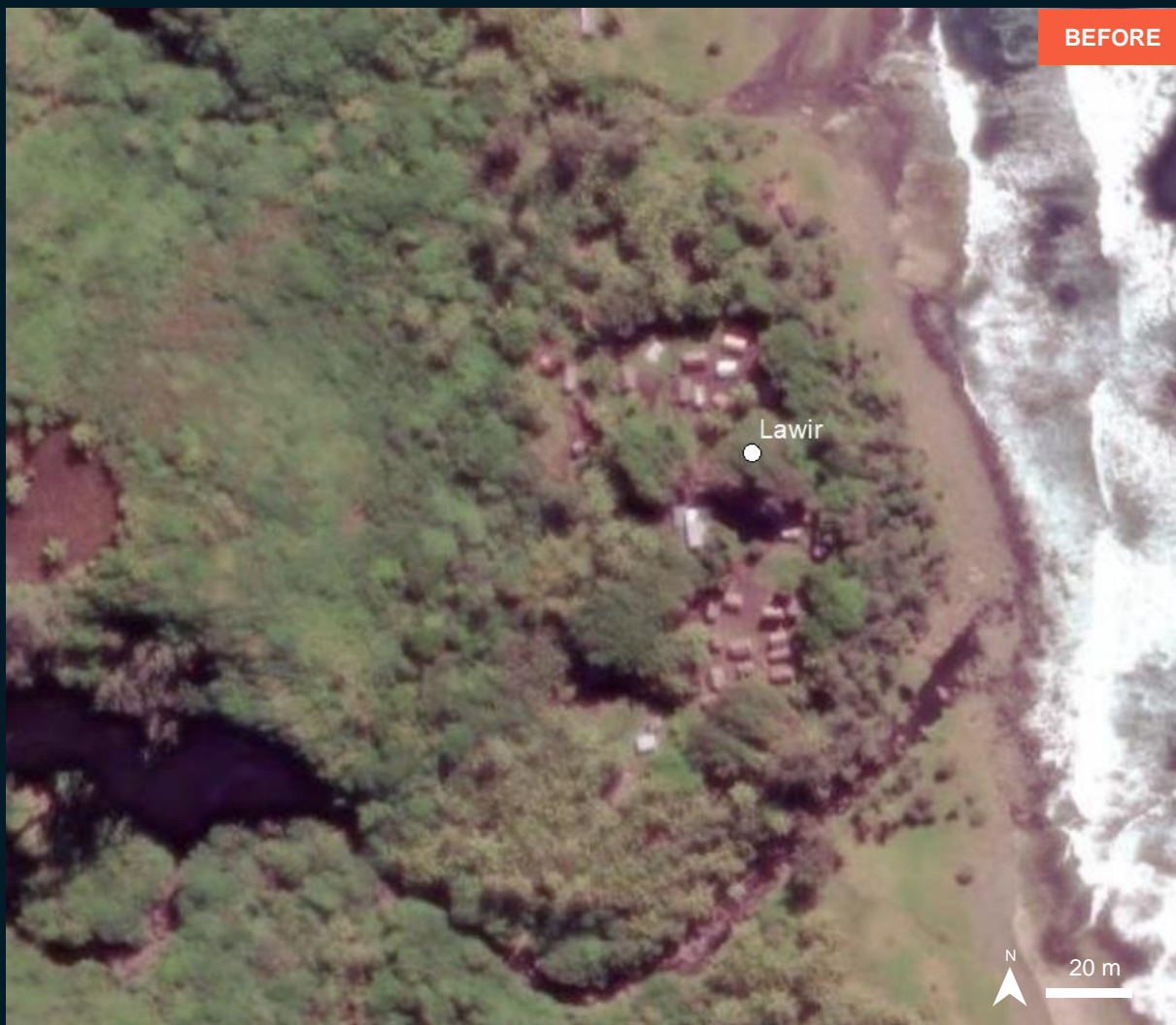


Worldview-2 / 04 March 2023

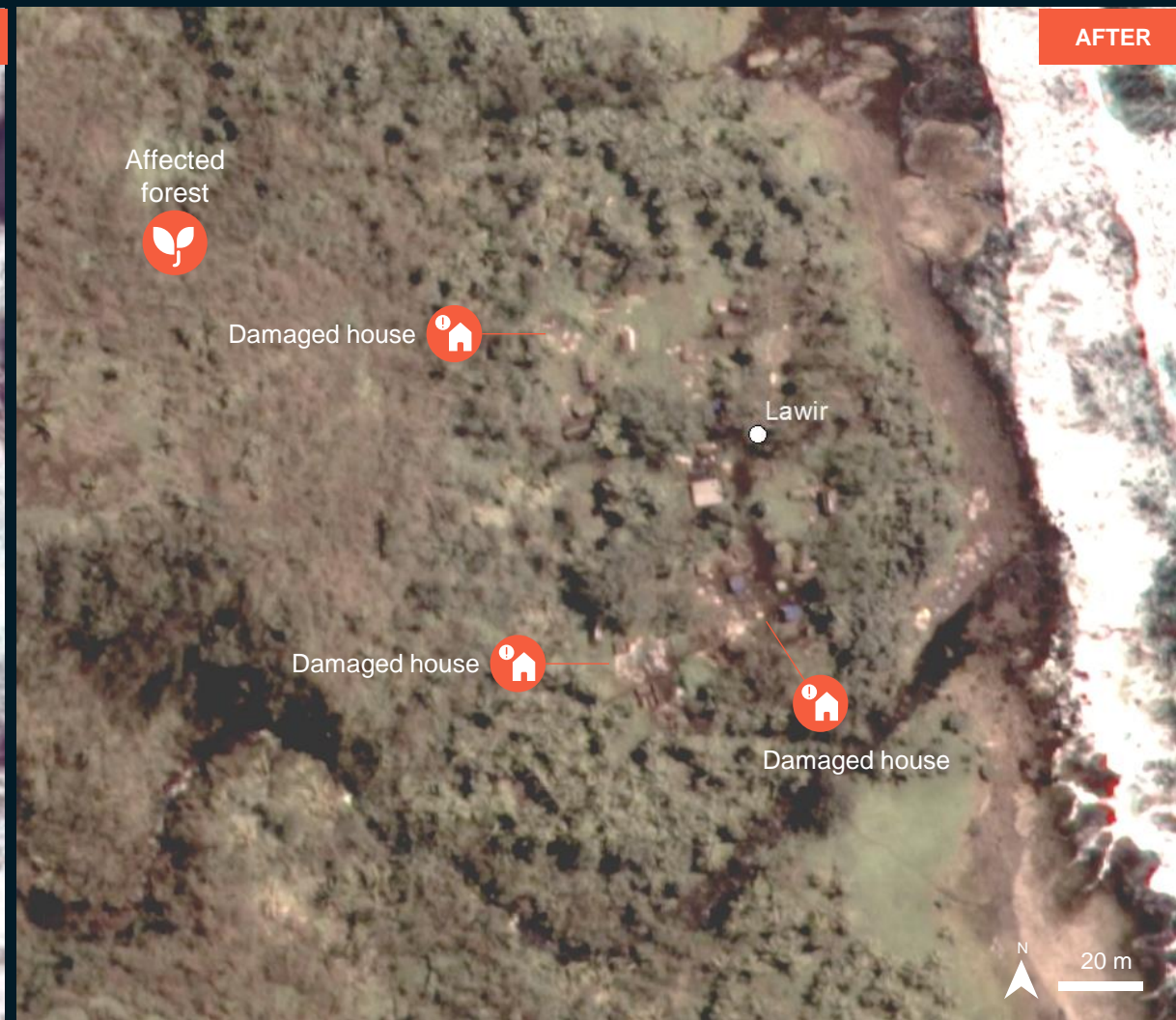
AOI 1-2 LAWIR VILLAGE, TANNA ISLAND, NORTH TANNA COUNCIL, TAFEA PROVINCE

Affected forest and damaged houses

Image center:
169°20'39"E
19°23'22"S



WorldView-3 / 25 June 2022



Worldview-2 / 04 March 2023

AOI 2 EFATE ISLAND, SHEFA PROVINCE

ISLAND

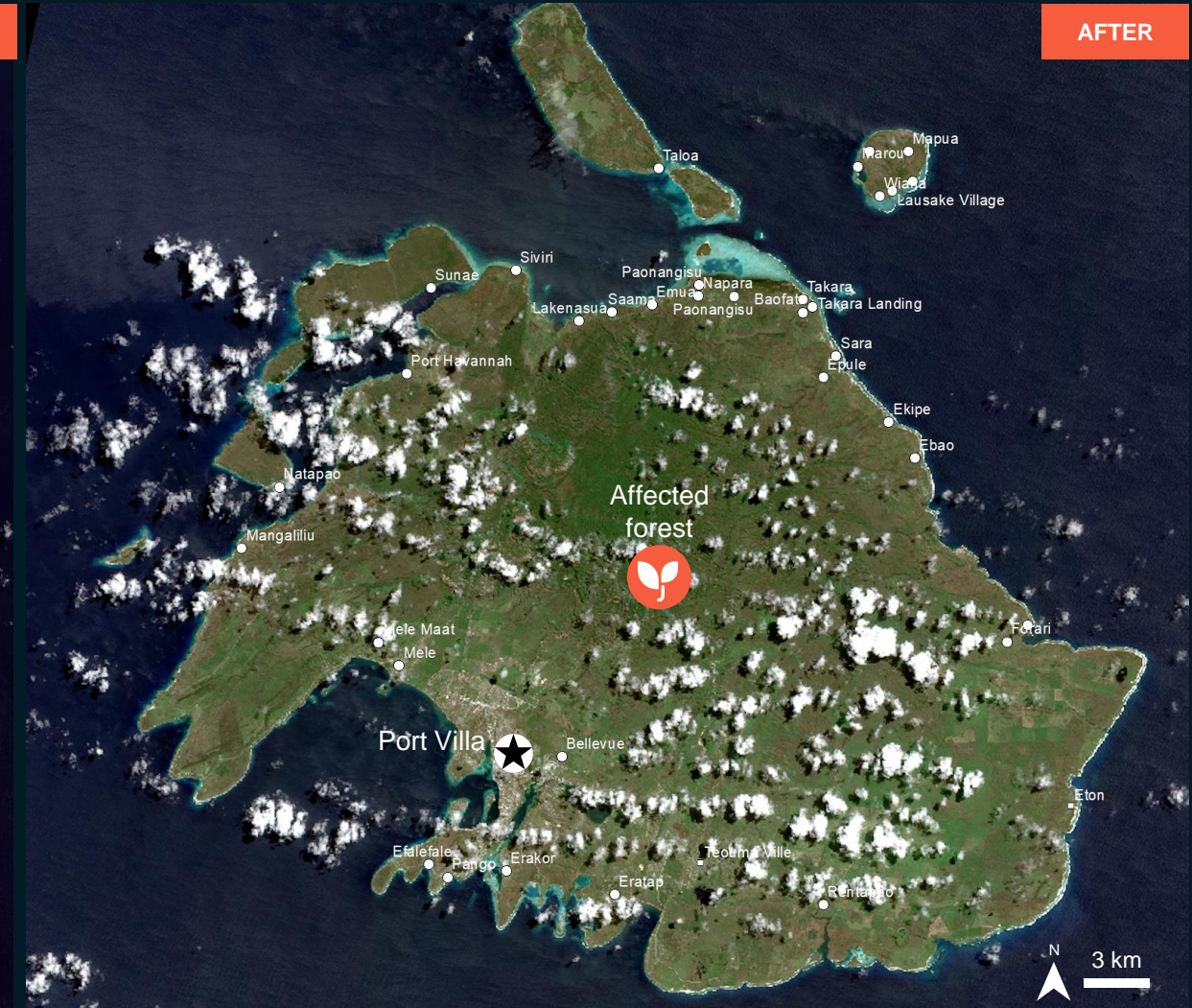
Image center:
168°22'39.079"E
17°40'0.473"S



Affected forest over the entire island



Sentinel-2 / 10 April 2022

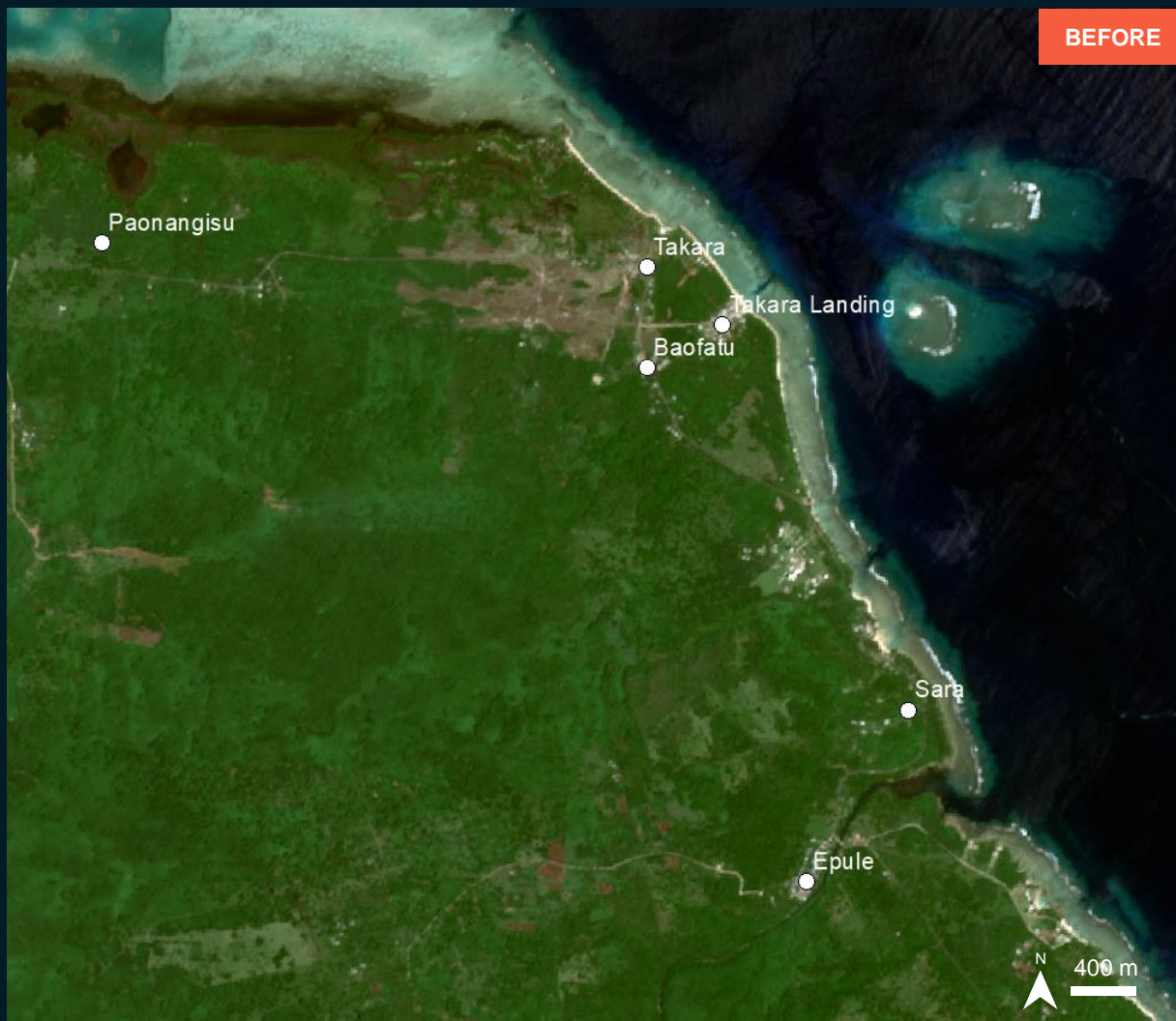


Sentinel-2 / 11 March 2023

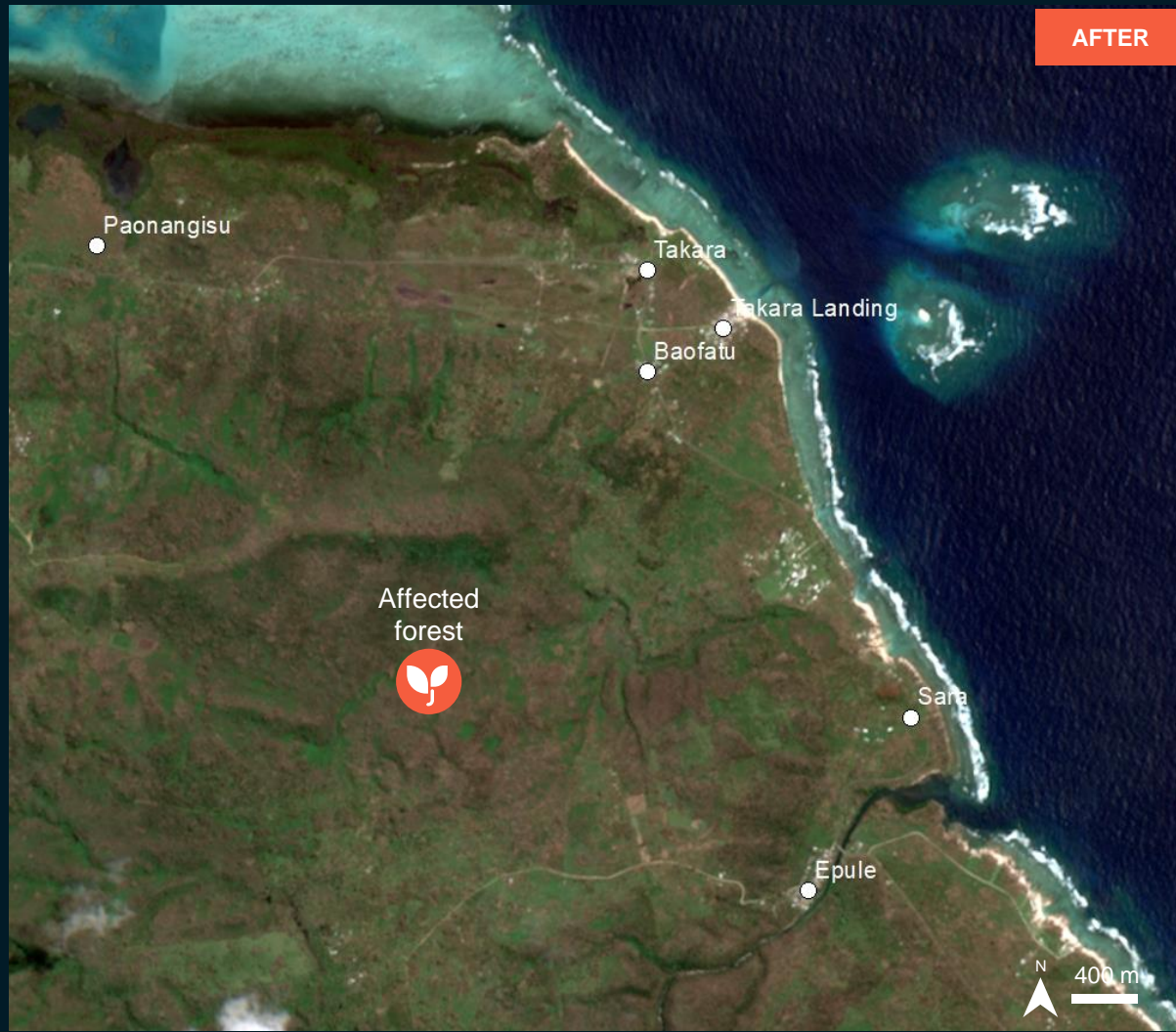
AOI 2 EFATE ISLAND, NORTH EFATE COUNCIL, SHEFA PROVINCE

Affected forest

Image center:
168°26'38"E
17°33'12"S



Sentinel-2 / 10 April 2022



Sentinel-2 / 11 March 2023

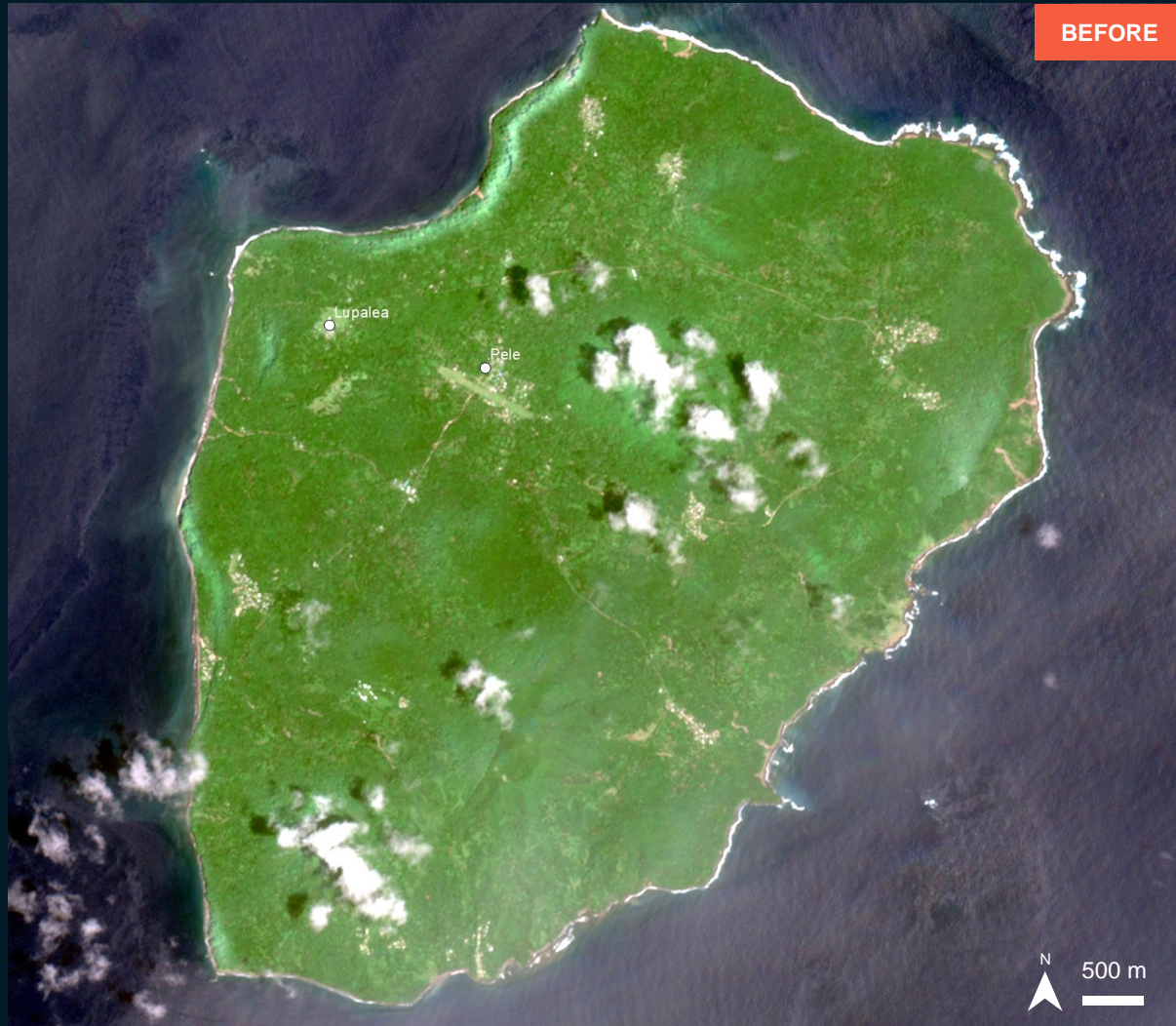
AOI 3 TONGOA ISLAND, SHEFA PROVINCE

ISLAND

Image center:
168°33'35"E
16°54'0"S

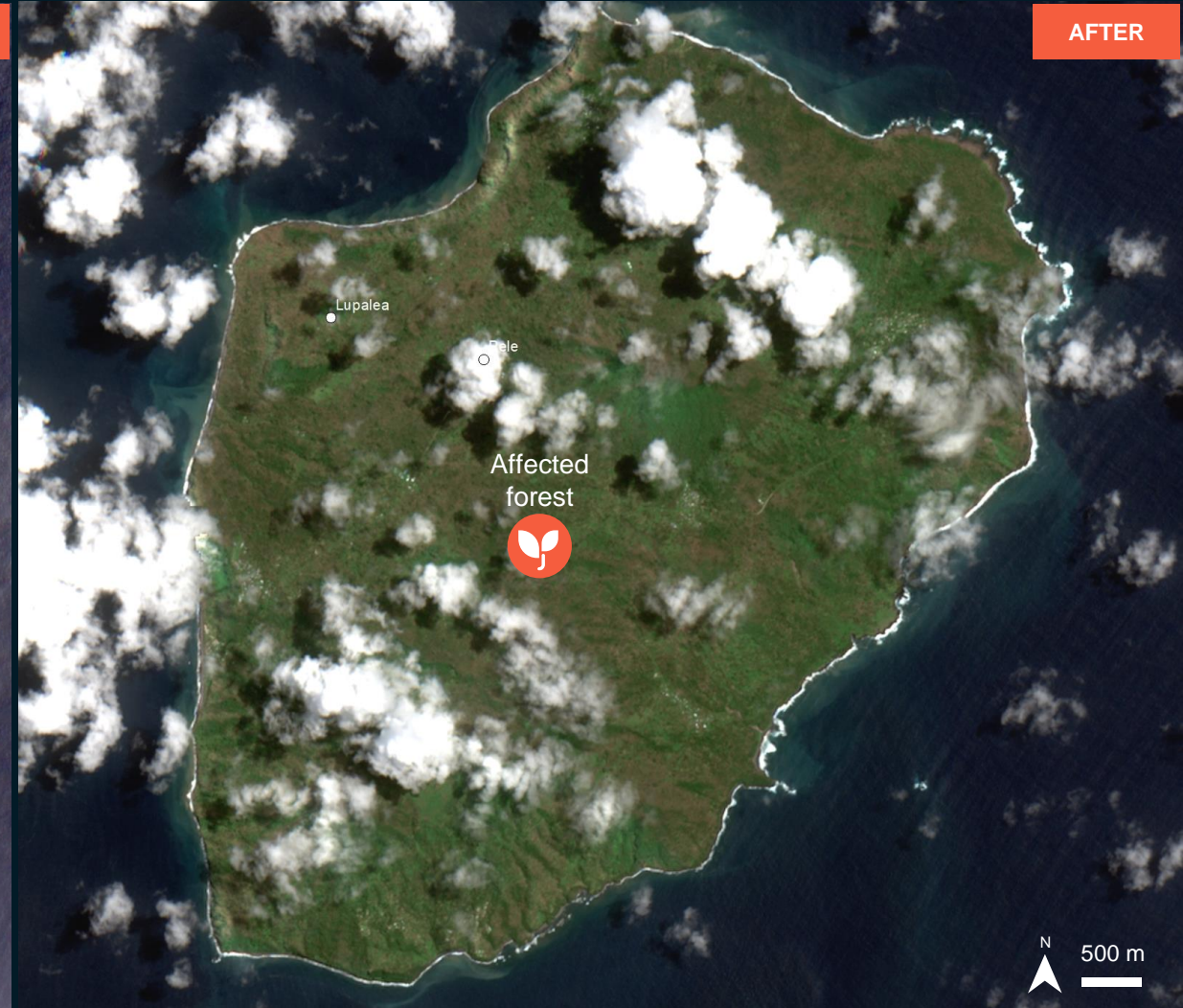


Affected forest over the entire island



BEFORE

Sentinel-2 / 21 December 2022



AFTER

Sentinel-2 / 06 March 2023

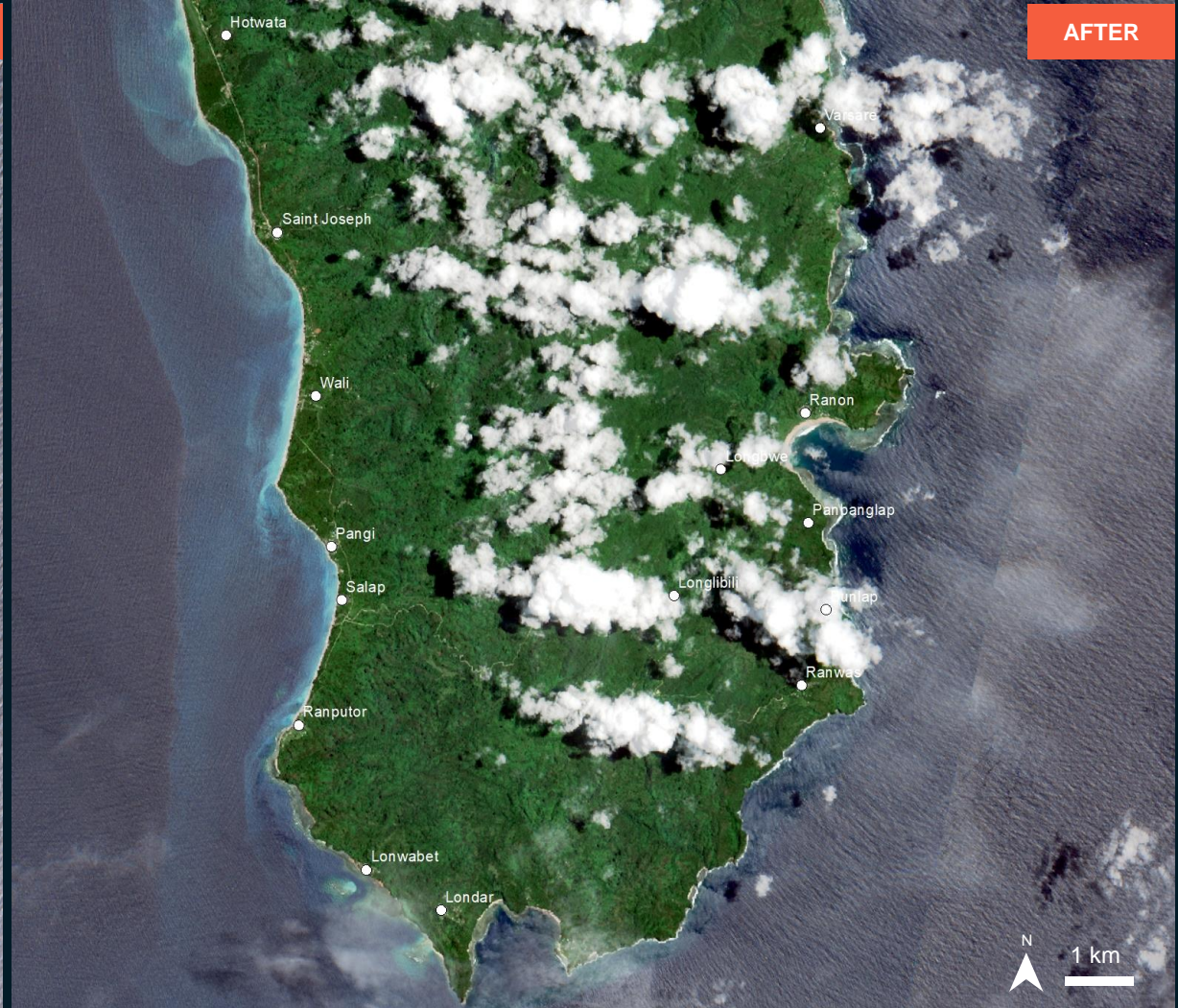
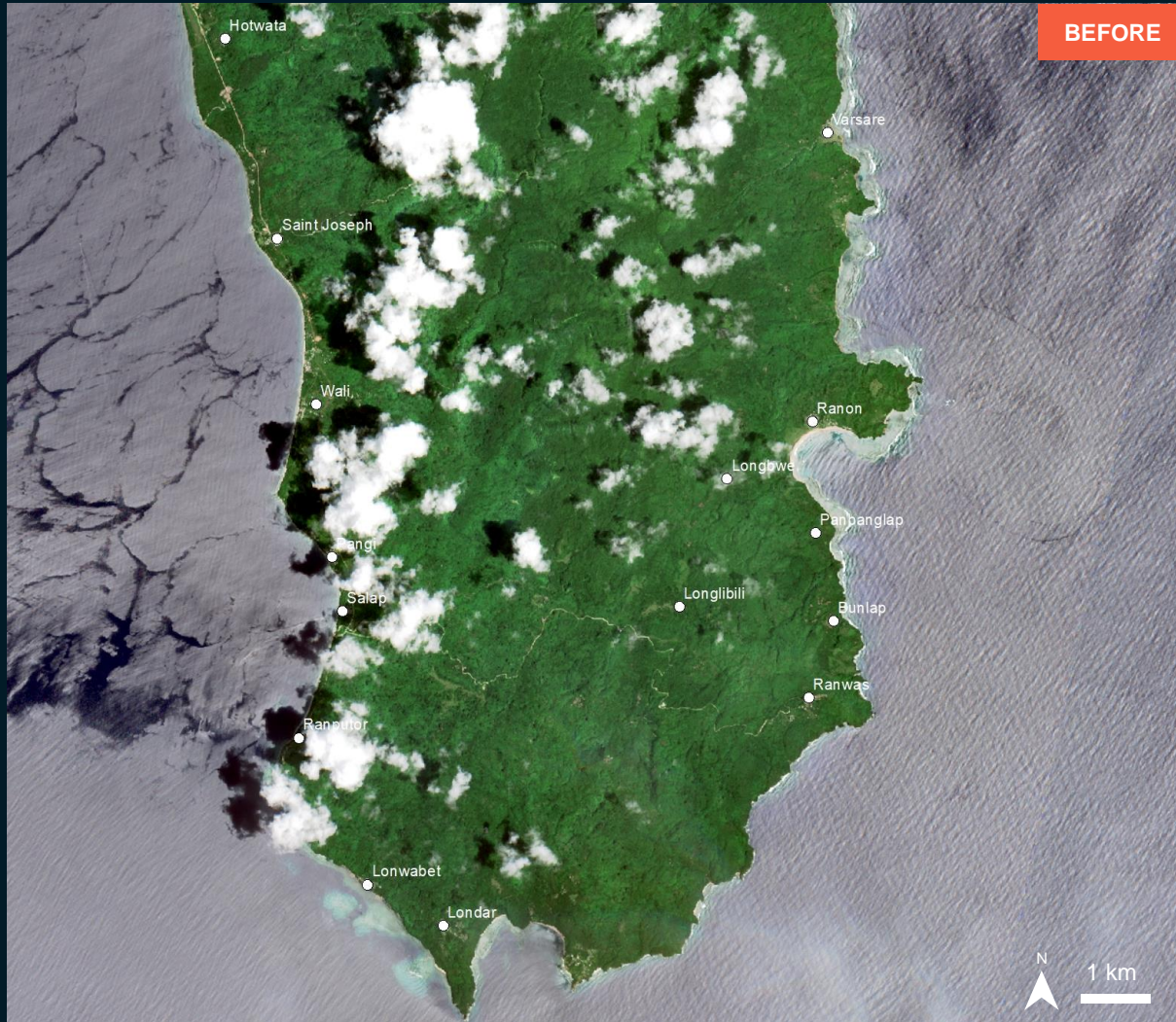
AOI 4 SOUTH PENTECOST ISLAND, SOUTH PENTECOST, COUNCIL, PENAMA PROVINCE

ISLAND

Image center:
168°13'55"E
15°56'16"S



No visible affected forest

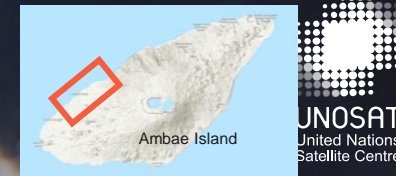


Sentinel-2 / 19 December 2022

Sentinel-2 / 04 March 2023

AOI 5 AMBAE ISLAND, WEST AMBAE COUNCIL, PENAMA PROVINCE

Landslide and affected shoreline



ESRI, Topography

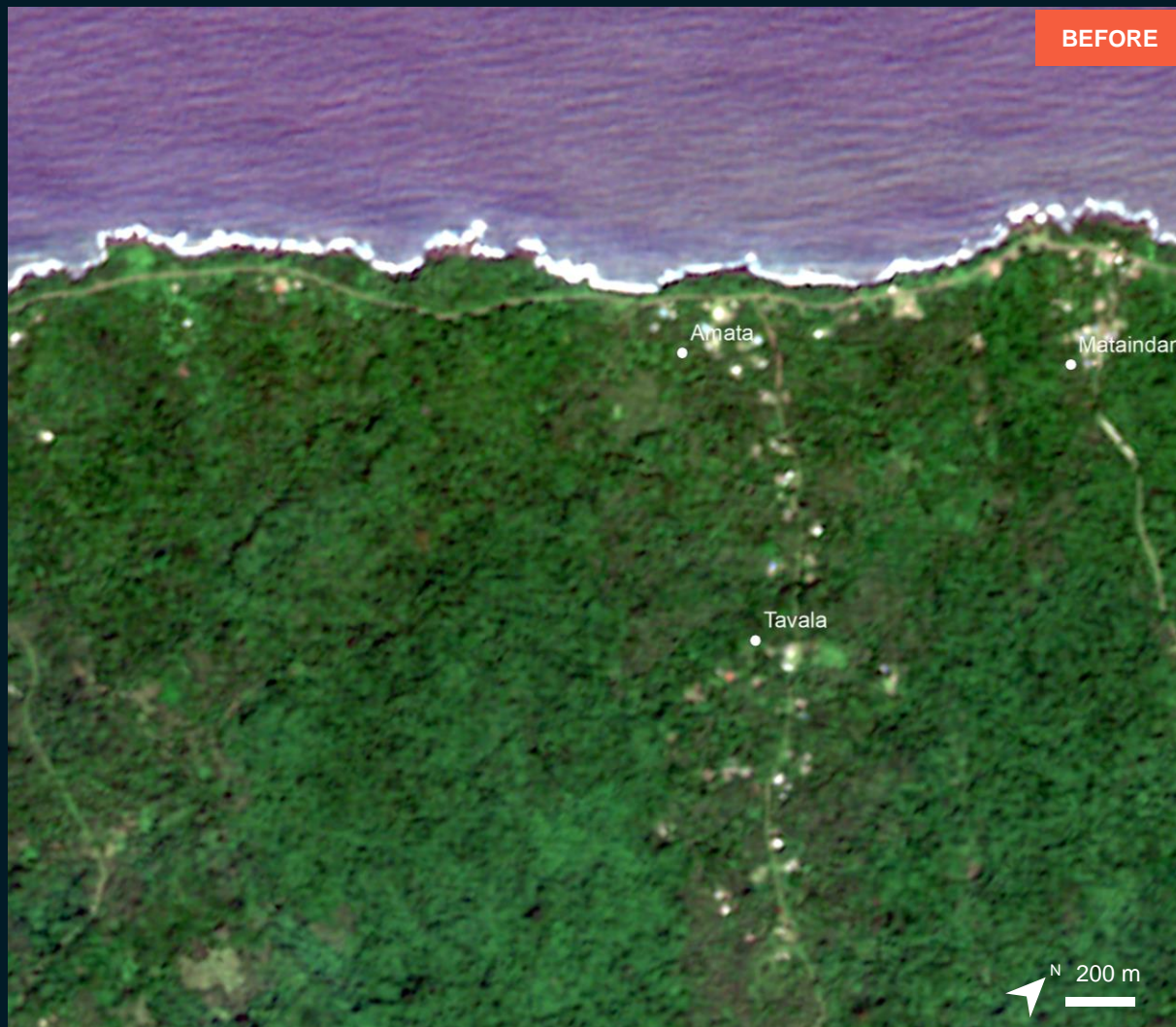


Sentinel-2 image acquired on 09 March 2023, XXX UTC
Image Center : 167°43'53"E 15°23'13"S

AOI 5-1 AMBAE ISLAND, WEST AMBAE COUNCIL, PENAMA PROVINCE

Landslide and potentially affected road

Image center:
167°42'52"E
15°23'47"S



Sentinel-2 / 4 December 2022



Sentinel-2 / 9 March 2023

AOI 5-2 AMBAE ISLAND, WEST AMBAE COUNCIL, PENAMA PROVINCE

Affected shoreline and potentially affected houses

Image center:
167°44'39"E
15°22'1"S



WorldView-2 / 6 May 2022

WorldView2 / 4 March 2023

AOI 6-1 SOUTH MALEKULA COUNCIL, MALAMPA PROVINCE

Image center:
167°48'26"E
16°25'32"S



No visible affected forest



Sentinel-2 / 28 January 2022



Sentinel-2 / 09 March 2023

AOI 6-2 SOUTH MALEKULA COUNCIL, MALAMPA PROVINCE

Image center:
167°49'52"E
16°31'28"S



Potentially affected shoreline



Sentinel-2 / 28 January 2022



Sentinel-2 / 09 March 2023

Summary Of Findings

Based on satellite images acquired on 04th, 09th and 11th of March 2023, the findings are the following:

Tanna Island, Tafea Province;

- Widespread affected forest observed over Tanna Island;
- Potentially affected houses observed in West Tanna Council, Tafea Province;
- Widespread damaged houses observed in Lawir Village, Tanna Island, North Tanna Council, Tafea Province;

Efate Island, Shefa Province;

- Widespread affected forest observed over Efate Island;

Tongoa Island, Shefa Province

- Widespread affected forest observed over Tongoa Island;

South Pentecost Island, Penama Province

- No visible affected forest observed over cloud free areas in South Pentecost Island, South Pentecost Council, Penama Province;

Ambae Island, West Ambae Council, Penama Province;

- Landslide observed in Ambae Island, West Ambae Council, Penama Province ;
- Affected shoreline observed in Ambae Island, West Ambae Council, Penama Province ;
- Potentially affected road and potentially affected houses observed in Ambae Island, West Ambae Council, Penama Province ;

Malekula Island, Malampa Province;

- Affected shoreline observed in South Malekula Council, Malampa Province;

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Data sources:

(1) Satellite Image (Post-event)

Satellite : Worldview-2

Acquisition date : 04 March 2023, 23:00 UTC

Resolution: 50 cm

Copyright: 2023 Digital Globe

Source: USGS

Satellite : Sentinel-2

Acquisition date : 09 March 2023, 23:09 UTC

Acquisition date : 11 March 2023, 23:00 UTC

Resolution: 10 m

Copyright: Contains modified Copernicus Sentinel Data [2023]

Source: ESA

(2) Satellite Image (Pre-event)

Satellite : Worldview-2

Acquisition date : 6 May 2022

Resolution: 50 cm

Copyright: © 2022 DigitalGlobe, Inc., Longmont CO USA 80503

Source: ESRI Basemap

Satellite : Sentinel-2

Acquisition date : 10 April 2022, 23:08 UTC

Acquisition date : 04 December 2022, 23:09 UTC

Acquisition date : 28 January 2023, 23:09 UTC

Acquisition date : 14 February 2023, 23:00 UTC

Resolution: 10 m

Copyright: Contains modified Copernicus Sentinel Data [2023]

Source: ESA

(3) Ancillary data

Administrative boundaries: Secretariat of the Pacific Community (SPC), Statistics for Development Division and OCHA Office of the Pacific Islands

Analysis: United Nations Satellite Centre (UNOSAT)

Production: United Nations Satellite Centre (UNOSAT)

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