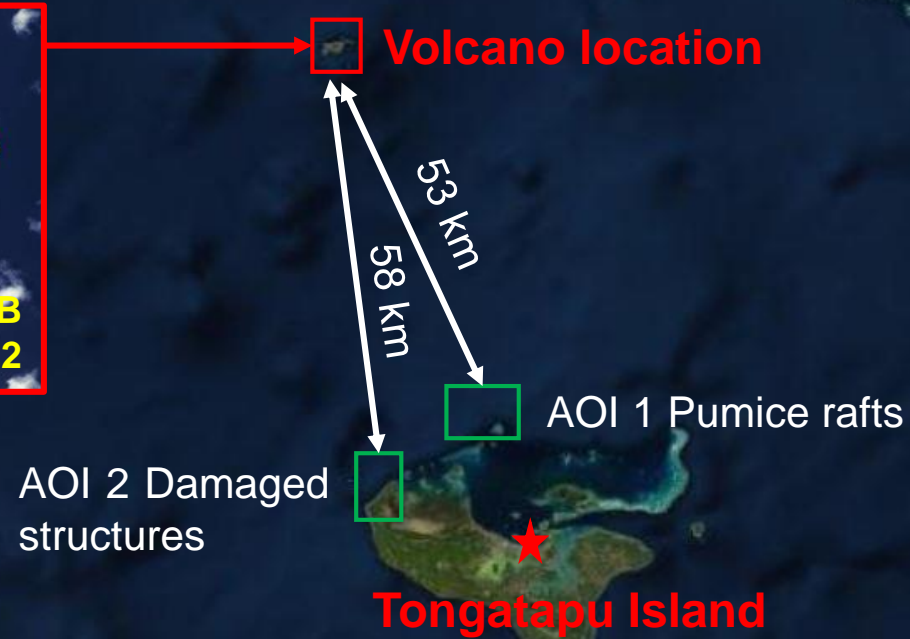


# Volcanic Eruption of the 15th of January 2022 and induced tsunami, Hunga Tonga-hunga Ha'apai Volcano

Activation-744 (call-855)



## Satellite-Derived Damage Observation



State Key Laboratory of Satellite Ocean Environment Dynamics, Second Institute of Oceanography, MNR, China



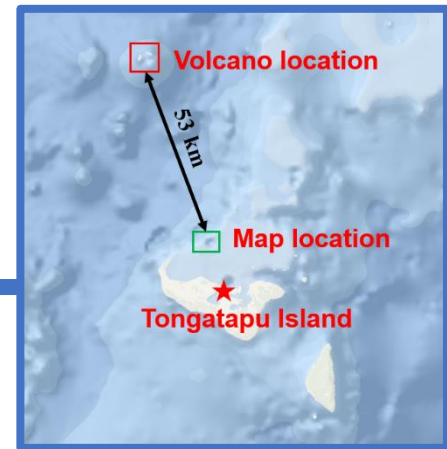
China Center for Resource Satellite Data and Applications, CASC, China



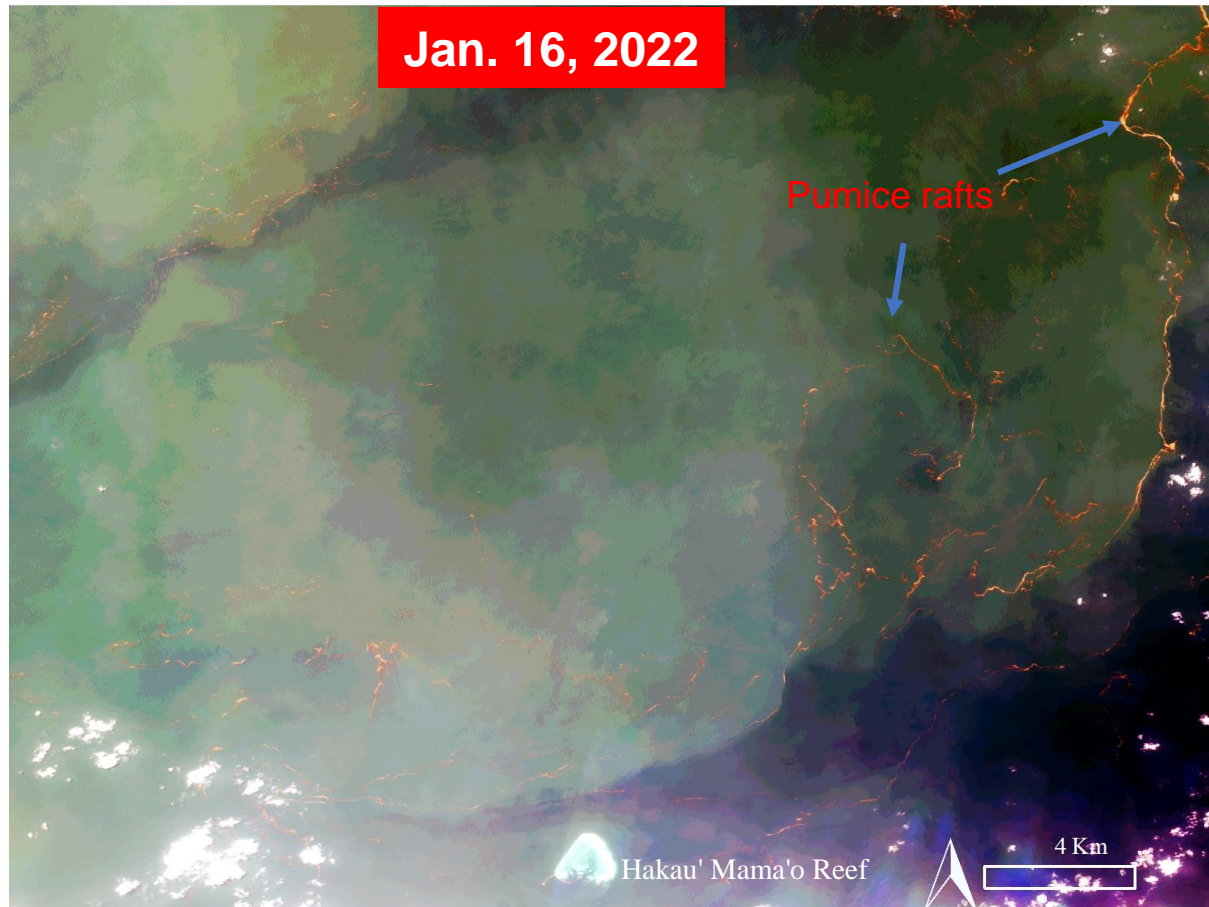


# AOI 1

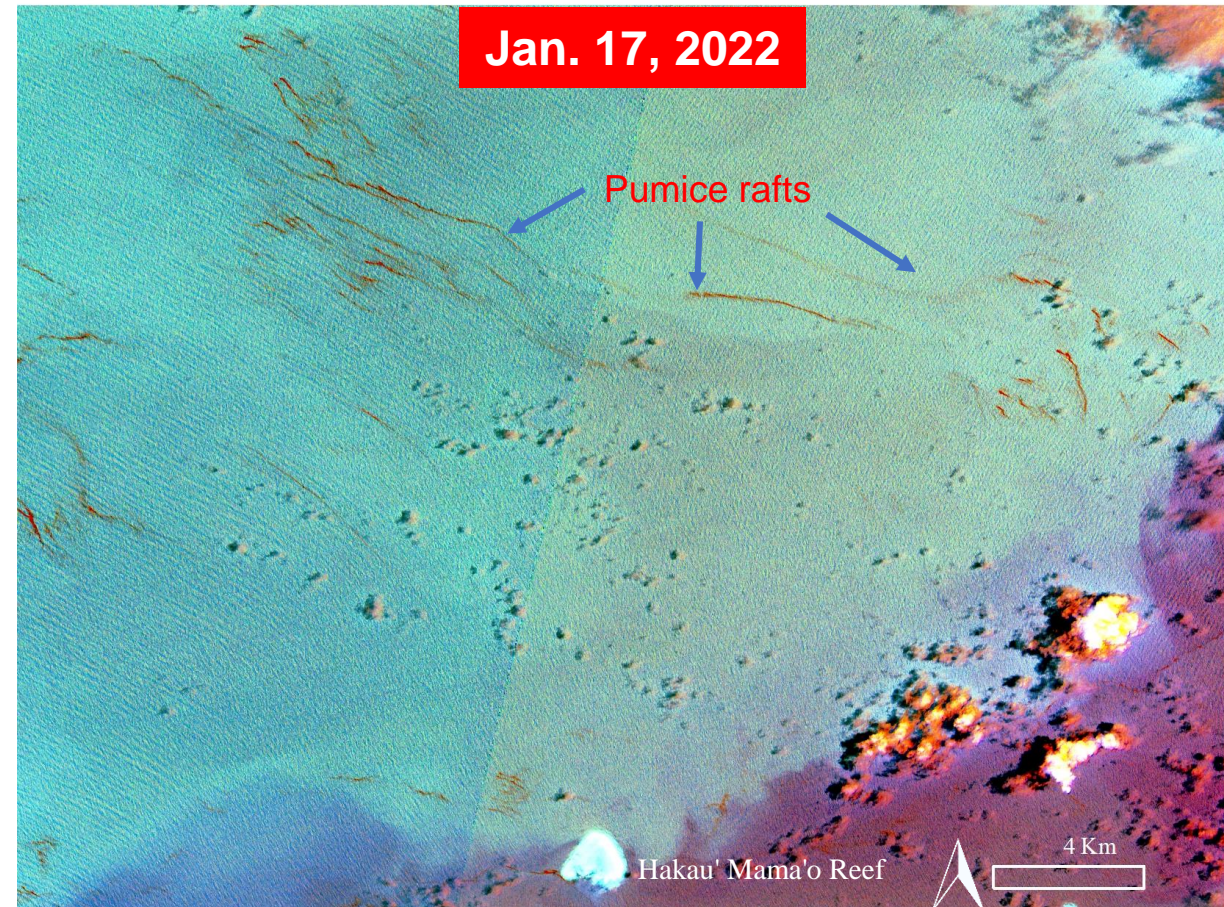
## Pumice rafts nearby the Tongatapu Island



Floating pumice rafts from the volcanic eruption are observed spreading in the north offshore regions nearby the Tongatapu Island, Jan. 16 and Jan.17, 2022.



Gaofen-1B / 16 Jan. 2022



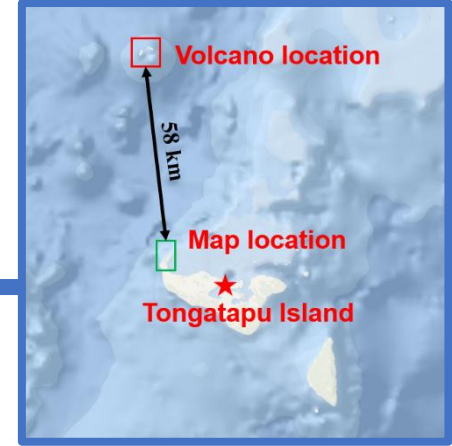
Sentinel-2B / 17 Jan. 2022





# AOI 2

## Damaged structures on the Tongatapu Island



Volcanic ash covers the vegetations and structures on Tongatapu Island, Jan.17, 2022. Significant tsunami damages are observed on the northeast coast of the Island.



ESRI Basemap / Worldview-2 / 14 May 2020



Jilin-1 / 17 Jan. 2022





# AOI 2-a

## Damaged structures on the Tongatapu Island



ESRI Basemap / Worldview-2 / 14 May 2020



Jilin-1 / 17 Jan. 2022





# AOI 2-b Damaged structures on the Tongatapu Island



ESRI Basemap / Worldview-2 / 14 May 2020



Jilin-1 / 17 Jan. 2022





# AOI 2-c Damaged structures on the Tongatapu Island



ESRI Basemap / Worldview-2 / 14 May 2020



Jilin-1 / 17 Jan. 2022



# COPYRIGHTS AND SOURCES

## Data sources:

### (1) Satellite Image (Post-event):

Gaofen-1B/D: 16 Jan. 2022

Resolution: 2 m

Copyright: @ China Center for Resource Satellite Data and Applications

Jilin-1: 17 Jan. 2022

Resolution: 0.92 m

Copyright: @ Chang Guang Satellite Technology Co., Ltd.

Sentinel-2B: 17 Jan. 2022

Resolution: 10 m

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### (2) Satellite Image (Pre-event):

Worldview-2: 14 May 2020

Resolution: 0.5 m

Copyright: @ESRI Basemap

### Spatial Reference:

Name: WGS 1984 UTM Zone 1S

PCS: WGS 1984 UTM Zone 1S

GCS: GCS WGS 1984

Datum: WGS 1984