

# Thick smoke plume over Semisopochnoi, Alaska

Sentinel-1 CSAR IW acquired on 14 April 2021 at 05:44:49 UTC

Sentinel-3 OLCI FR & OLCI FR acquired on 15 April 2021 from 22:08:19 to 23:09:47 UTC

...

Sentinel-5P TROPOMI SO2 acquired on 19 April 2021 at 00:32:57 UTC

Sentinel-2 MSI acquired on 22 April 2021 at 23:15:49 UTC

Author(s): Sentinel Vision team, VisioTerra, France - [svp@visioterra.fr](mailto:svp@visioterra.fr)

Keyword(s): Geohazard, natural disaster, volcano, island, atmosphere, biodiversity, arc, Pacific Ring of Fire, United States, USA



[3D Layerstack](#)

Fig. 1 - S5P TROPOMI (19 - 24.05.2021) - Semisopochnoi volcano has erupted, emitting a Sulfur Dioxide plume visible by S5P TROPOMI.

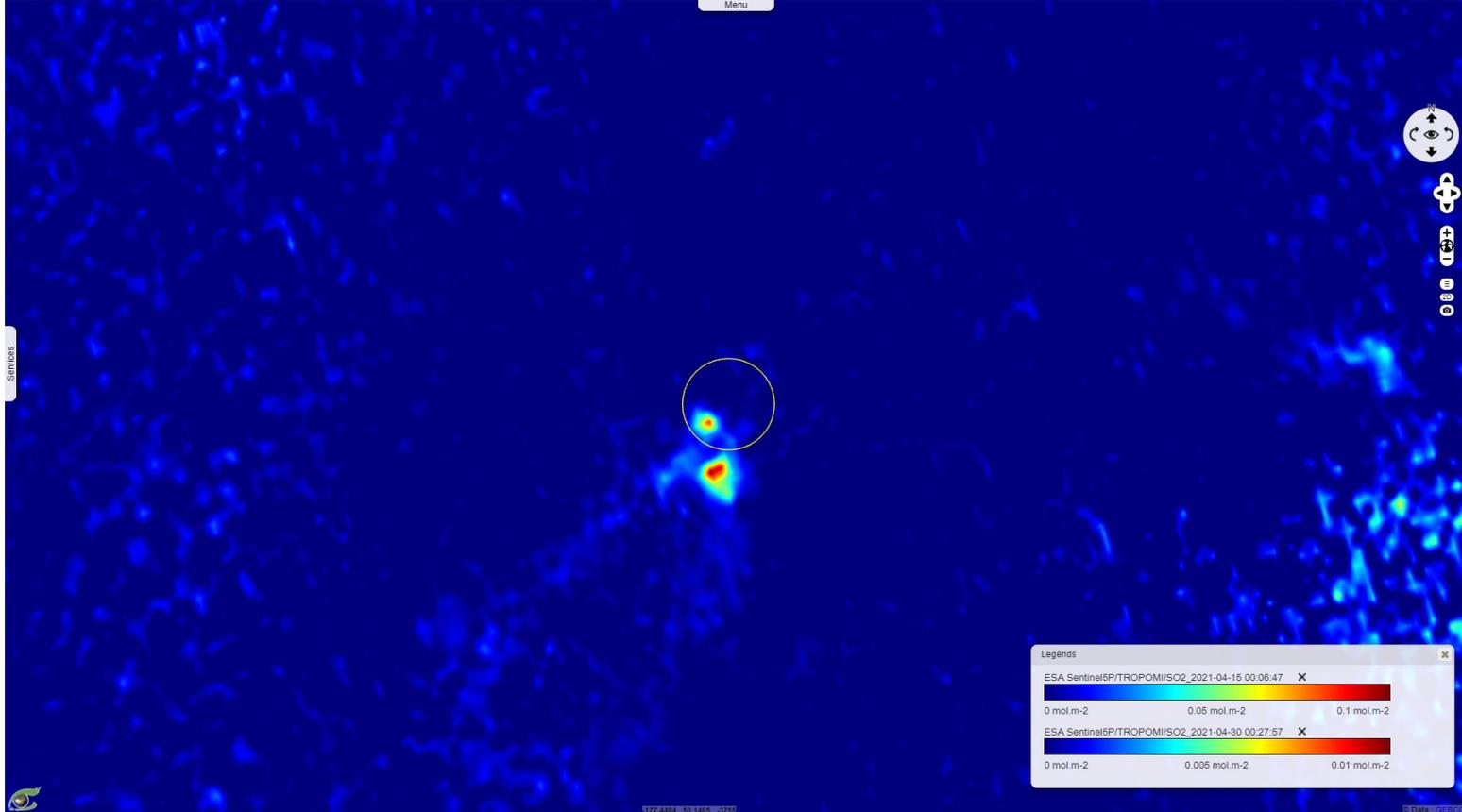


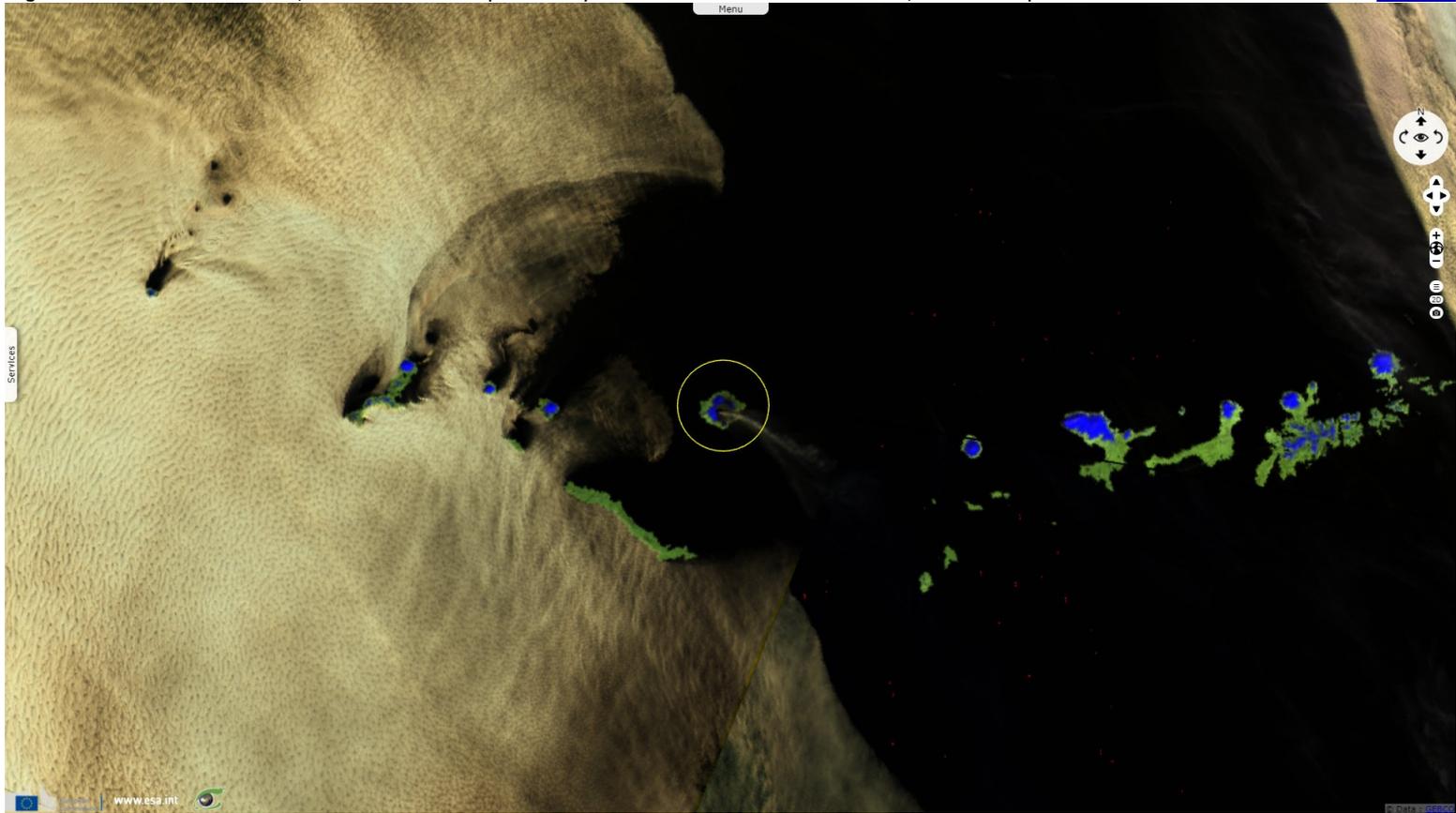
Fig. 2 - S3 OLCI (15.04.2021, 22:08) - The island is 21 km x 18 km in size. It is the largest of the young western Aleutian volcanic islands.

[3D view](#)



Fig. 3 - S3 SLSTR (15.04.2021, 23:09) - SLSTR acquisition by its sister satellite one hour later, the smoke plume has drifted further east.

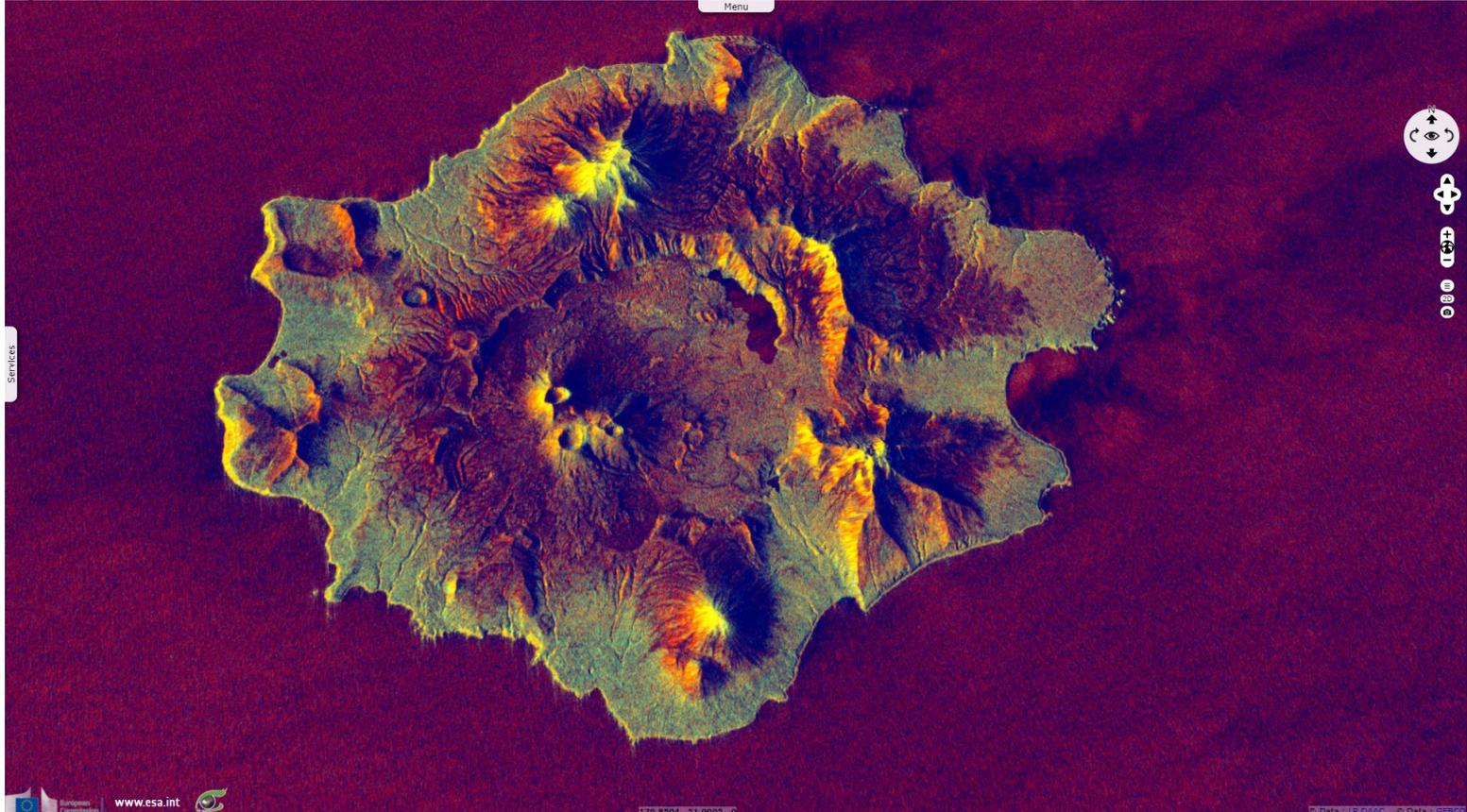
[3D view](#)



Semisopochnoi is located near the confluence of the Aleutian Arc and Bowers ridge. It is the largest subaerial volcano of the western Aleutians while its summit is 1221m above the sea. It is bigger and higher and taking into account its base on the seafloor.

Fig. 4 - S1 (14.04.2021) - Multiple volcanic structures are visible around this caldera.

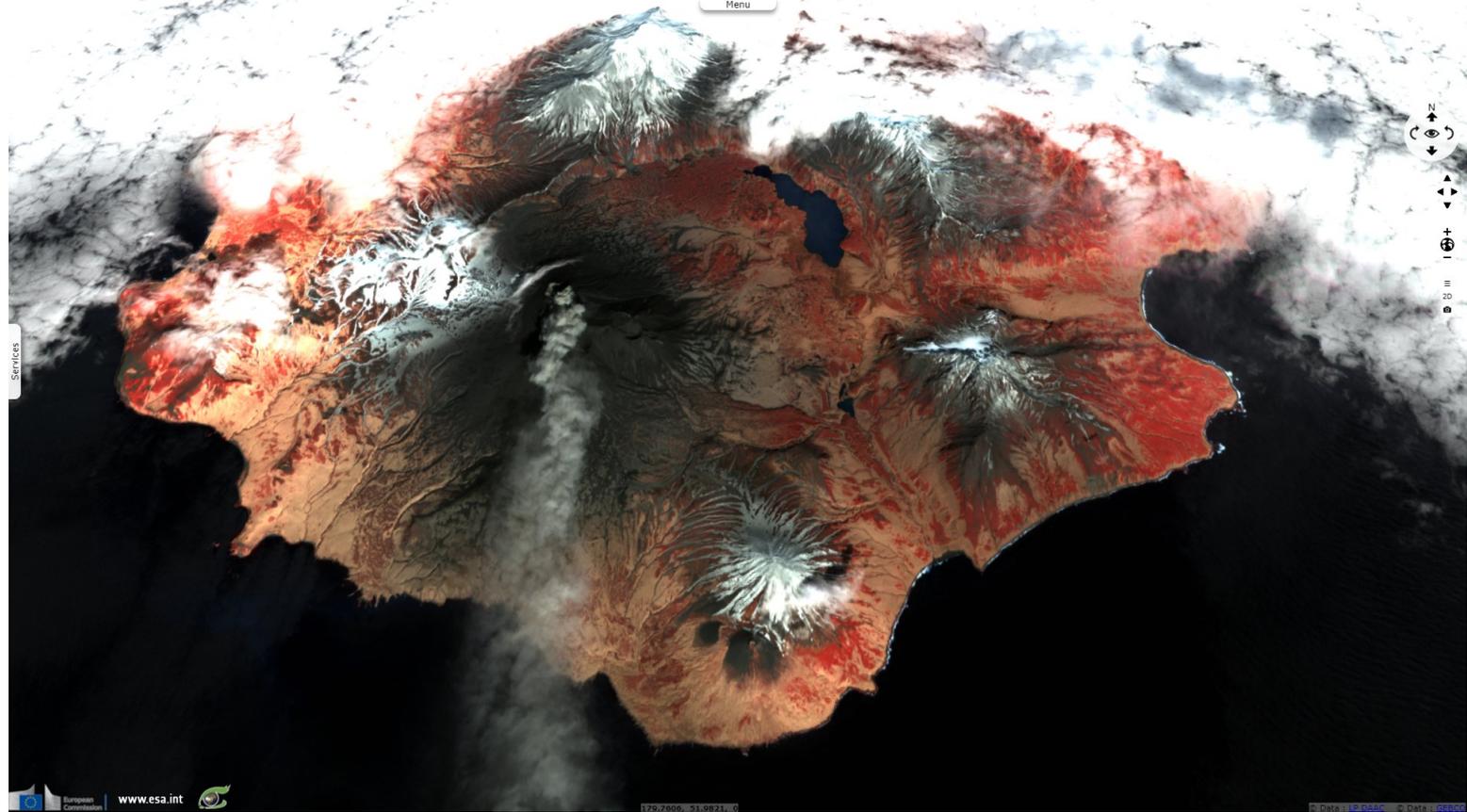
[3D view](#)



The island contains a caldera 8 km wide that formed as a result of collapse of a low-angle volcano following a large eruption.

Fig. 5 - S2 (22.04.2021) - As remote as it is, its avian dwellers are not only disturbed by volcanoes, but also by human-brought species.

[3D view](#)



In total, Semisopochnoi supports well over a million seabirds, most of which are least auklets or crested auklets. While the island has remained free of Norway rats, most ground-nesting bird species and most burrow-nesting seabirds were extirpated by foxes after their introduction during the 19th century. The fox populations have since been removed.

*The views expressed herein can in no way be taken to reflect the official opinion of the European Space Agency or the European Union. Contains modified Copernicus Sentinel data 2021, processed by VisioTerra.*

More on European Commission space:							
More on ESA:				<a href="#">S-1 website</a>	<a href="#">S-2 website</a>	<a href="#">S-3 website</a>	
More on Copernicus program:				<a href="#">SciHub portal</a>	<a href="#">Cophub portal</a>	<a href="#">Inthub portal</a>	<a href="#">Colhub portal</a>
More on VisioTerra:				<a href="#">Sentinel Vision Portal</a>	<a href="#">Envisat+ERS portal</a>	<a href="#">Swarm+GOCE portal</a>	<a href="#">CryoSat portal</a>



Funded by the EU and ESA

SED-857-SentinelVision

