

Visit to Comoros archipelago - Moheli Island

Sentinel-1 CSAR IW acquired on 18 August 2017 at 02:41:09 UTC
Sentinel-2 MSI acquired on 19 September 2018 at 07:22:01 UTC

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[2D Layerstack](#)

Fig. 1 - S1 (18.08.2017) - vv,vh,vv colour composite - 2D view of Moheli Island, south east of Grandes Comores.

[2D view](#)

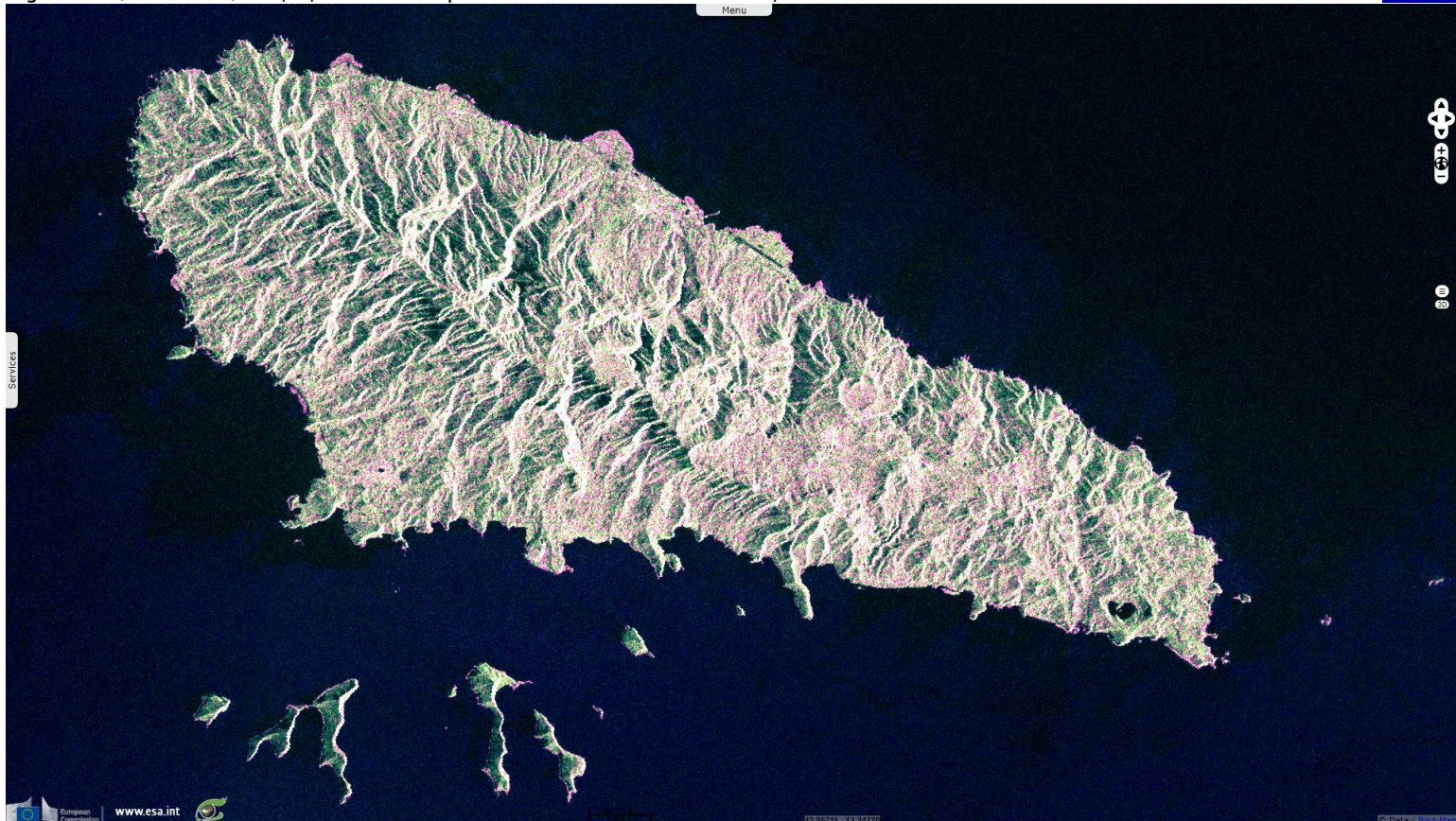


Fig. 2 - S2 (19.09.2018) - 4,3,2 natural colour, relief x2 - Coral reefs & volcanic relief show immediately on Moheli.

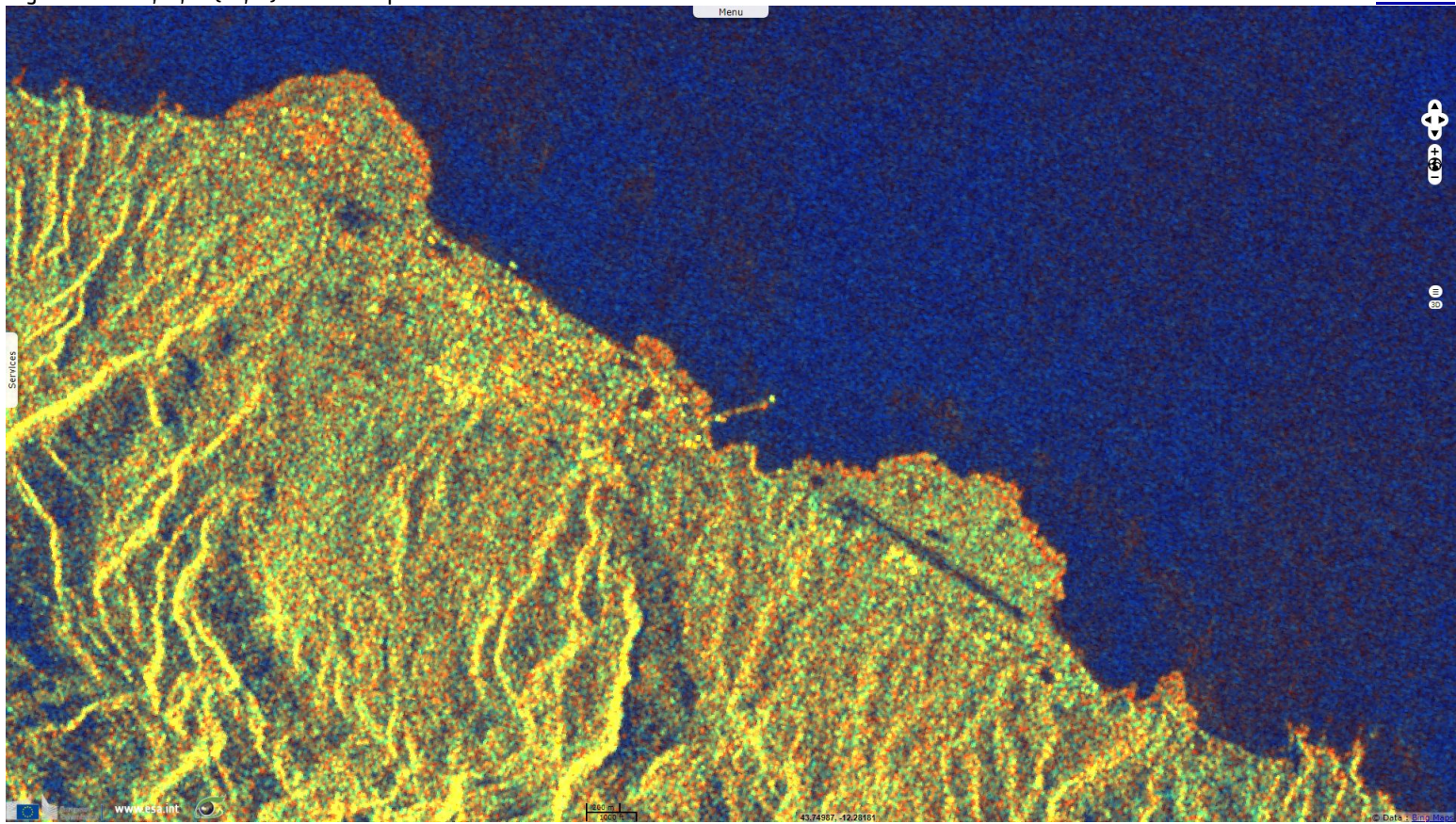
[3D view](#) [2D view](#)



Jean-Paul RUDANT, emeritus professor at University Paris-Est and speaker during ESA radar training commented : *"Moheli Island is 211km² large, oriented west-north-west / east-south-east. It is 30km-long and up to 12km wide around the 790m high volcano Mzekukulé that allowed the island to emerge from the flow. It is mostly covered with vegetation which appears in green on this Sentinel-2 « true colours » composite. The natural vegetal cover is varied, from coastal mangrove to dense altitude forest. The jagged shoreline alternates between beaches and rocky or basaltic points. Crops encompass subsistence farming for the local population and species dedicated to the export of by-products, such as Ylang ylang, which perfume wafts many places of Moheli."*

Fig. 3 - S1 - vv,vh,ndi(vh,vv) colour composite - Zoom on Fomboni on the north east coast.

[2D view](#)



"Fomboni, Moheli's main city, is located in the centre of the northern shore. Around a third of Moheli 30000 inhabitants live there."

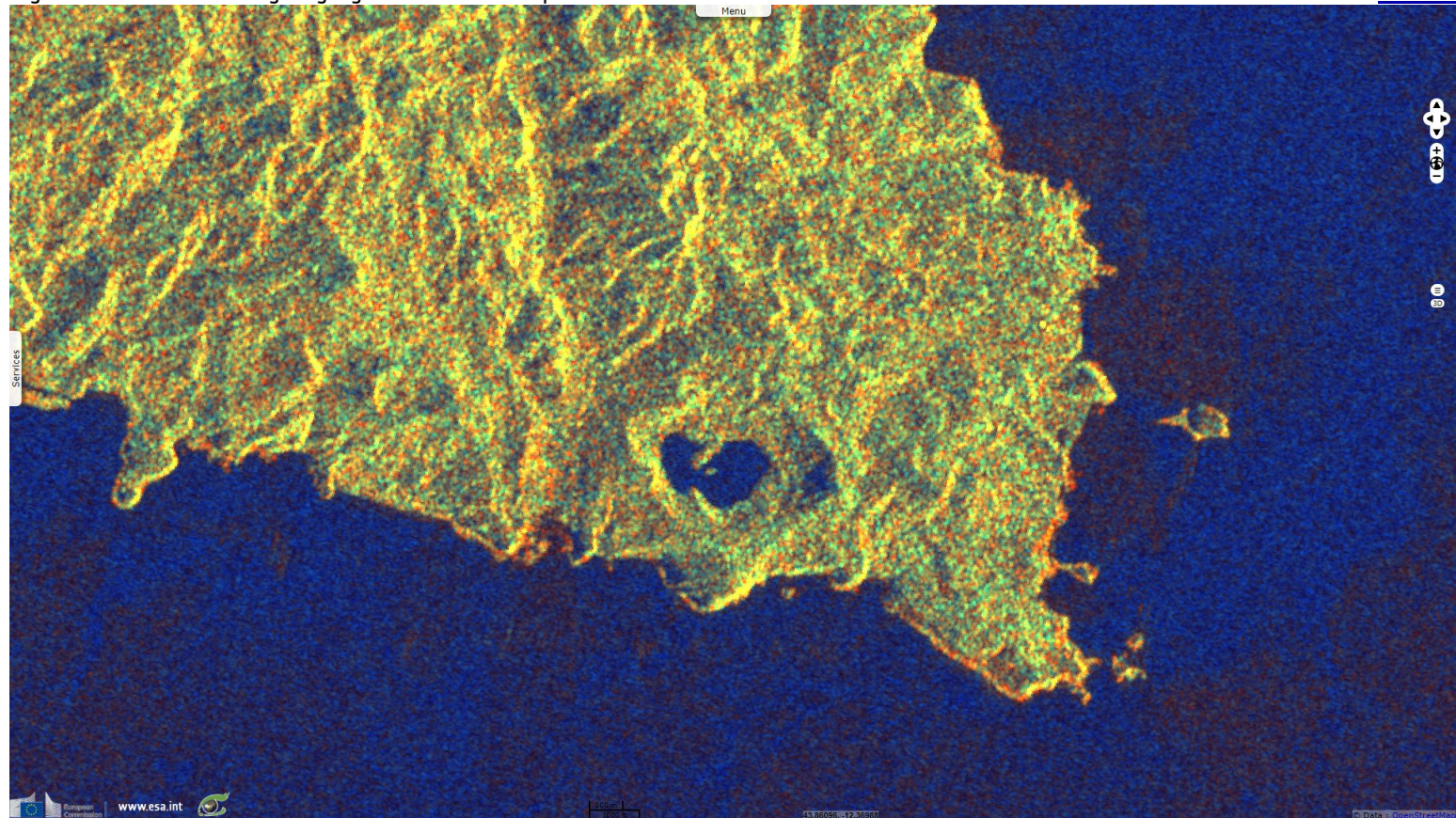
Fig. 4 - S2 - Optical image of Fomboni.

[3D view](#) [2D view](#)



Fig. 5 - S1 - The radar image highlights the volcanic depressions that hosts Lake Dziani Boundouni.

[2D view](#)



"The 30 hectares large Lake Dziani Boundouni is been classified as a Ramsar wetland due to the biodiversity of the bird species it supports. Moheli hosts a large diversity of flora (for example, dozens of species of orchids), nearly a third of which are endemic, and terrestrial fauna. Because of this great wealth, Moheli could be classified Biosphere Reserve."

Fig. 6 - S2 - Same view with optical images shows the water greenness that contrasts with coastal water.

[2D view](#)















Fig. 7 - S2 - The shallow waters of the coral reef constitute an important biodiversity site. [3D view](#)



"On the southern part of the island, from the coast up to 100 meters deep, is the Moheli Marine Park. The coral reef appears clearly in the South of the image. This site, a protected area since 2001, is a nesting site for green turtles, a breeding ground for humpback whales ; Coelacanth (a prehistoric deepwater fish) and Dugongs (a large marine mammal) are also present."

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