Am I Safe? Copernicus downstream service is zooming in on coastal flood risk

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MI-SAFE, why is it unique?

- Estimates parameters related to flood safety for any vegetated coast in the world.
- Combines global and local data, and automatically couples Earth Observation data, sea level, waves and vegetation parameters.
- Is based on verifiable scientific evidence for relationships between Remote





pressing challenges facing society today. The FAST project team developed MI-SAFE to provide Copernicus downstream services that demonstrate how coastal vegetation can contribute to meeting flood risk challenges.





- Sensing parameters, in situ surface characteristics, and wave dissipation.
- Uses open and standard formats and open source modelling (transparent and adaptable).
- Is part of Deltares communities, ensuring testing and continuation of product \bullet deliveries (oss@deltares).
- Is very versatile, offering Advanced services (data and modelling services) for end-users with more specific needs.

Structure and levels of MI-SAFE

MI-SAFE offers two types of services (data and modelling) at different levels of spatial scale and confidence (Educational, Expert and Advanced).

- **Open Geospatial data service (OGC data)** in standard and open format (Elevation; Vegetation; Wave and water level statistics).
- **Open Source Modelling (OS modelling):** Calibrated vegetation module to use on XBeach models based on our global vegetation presence map.

MI-SAFE services are provided at three levels:

- Educational (MI-SAFE viewer): With global coverage (MI-SAFE viewer). Quick scan of potential Nature-Based Solutions (NBS) even in poor data areas.
- **Expert** (MI-SAFE viewer): Services calibrated and validated for FAST study sites with detailed local information on vegetation, bathymetry and wave. Pre-design

assessment of NBS effect for kilometre scale locations.

Advanced (service on request) : Tailor-made solutions builds upon Expert level services. Detailed NBS designing or evaluation of NBS performance in time can be implemented for any location.

The MI-SAFE viewer: fast.openearth.eu

The MI-SAFE viewer is our main vehicle for accessing and demonstrating our services (Figure 1). The MI-SAFE viewer gives free access to online resources and ways to interact with the FAST team.

(1) Map canvas; (2) Search bar for places; (3) Shortcuts to zoom in on the FAST study sites (examples of Advanced services available in Tillingham site); (4) Geospatial layer selection; (5) Legend of the last layer toggled on; (6) Access to the MI-SAFE GeoNetwork CSW

catalogue;

(7) Access to modelling ('Results') and data services ('Data') and to the MI-SAFE wiki ('Wiki'); (8) Links to social media;

(9) Links to community and issue forms; (10) Zoom buttons;

(11) Transect modelled in the result box; (12) Modelling result box showing several tabs:

• Conditions --> physical condition of the site;

• Confidence --> quality of the information (confidence); Context --> context to the information displayed;



WWW.FAST-SPACE-PROJECT.ELL

Interact with the FAST consortium

The FAST partners have setup a series of opportunities to interact with the community before the end of the FAST project in December 2017 (goo.gl/ AHH3ka). We highlight particularly our next webinar (planned for 31st October) and the EU NBS flagship conference in Tallinn (Estonia). However, there are many other opportunities. We invite you to visit the MI-SAFE viewer and join our community via the community form available in the MI-SAFE viewer (Figure 1, box 9). You can also contact the FAST consortium using the contact details available in our FAST website (goo.gl/Nd1xye).



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• Sensitivity --> model result; (13) Modelling result summary; (14) Shortcuts to other MI-SAFE resources; (15) FAST project information.

Figure 1. Screen shots of the MI-SAFE viewer interface. On top 'Data' screen giving access to OGC data services. On the bottom, 'Results' screen giving access to OS modelling services.

More information? Full article in Pan European Networks: Science & Technology 24



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