

Disclaimer

Prototype Sentinel-1 automatic flood processing chain

The current Sentinel-1 flood service is still a prototype. The information present here should therefore be taken with caution and not be used for critical emergency operations. Since the results are not subject to any manual editing or post-processing, different errors and misclassifications can be present in the data.

Errors might especially occur in the following cases:

- Only open water surfaces are considered, i.e. areas of flooded vegetation are not included in the flood layer.
- Radar shadows resulting from buildings, vegetation (e.g. trees and forest edges) and steep topography can be misclassified as floods.
- Due to the side-looking viewing geometry of SAR-satellites, floods in urban areas may not be detected.
- Surface types with similar low radar backscatter than water surfaces (e.g. roads, airport runways, desert) can erroneously be classified as floods

Data sources copyright information

Sentinel-1: © ESA 2021

Reference publications

Twele, A., Cao, W., Plank, S., and S. Martinis 2016. Sentinel-1-based flood mapping: a fully automated processing chain. *International Journal of Remote Sensing*, 37, 2990-3004.

Martinis, S., Twele, A. and J. Kersten 2015. A fully automated TerraSAR-X based flood service. *ISPRS Journal of Photogrammetry and Remote Sensing*, 104, 203-212.

Citation

When disseminating data/layers of the Sentinel- flood service in e.g. presentations or own map products, please cite the source as follows: © DLR/ZKI 2021