

Disclaimer

Sentinel-1/2 reference water product

As the results are not subject to any manual editing or post-processing, the information present here should therefore be taken with caution.

The reference water product consists of aggregated surface water extent information extracted from Sentinel-1/2 observations within an observation period of 2 years.

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 2024, Sentinel-2: © ESA 2024

Reference publications

Martinis, S., Groth, S., Wieland, M., Knopp, L., and Rättich, M. 2022. Towards a global seasonal and permanent reference water product from Sentinel-1/2 data for improved flood mapping. Remote Sensing of Environment, 278, 113077.

Bereczky, M., Wieland, M., Krullikowski, C., Martinis, S. and Plank, S. 2022: Sentinel-1-based water and flood mapping: benchmarking convolutional neural networks against an operational rule-based processing chain, IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, Vol. 15, 2023-2036.

Wieland, M. and Martinis, S. 2019: A modular processing chain for automated flood monitoring from multi-spectral satellite data. Remote Sensing, 11 (19), 2330, 1-23.

Citation

When disseminating data/layers of the reference water product in e.g. presentations or own map products, please cite the source as follows: © DLR/ZKI 2024

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