Deutsches Zentrum
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Disclaimer
Prototype TerraSAR-X automatic flood processing chain

The current TerraSAR-X 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

- The global reference water layer used for this service is composed of the following datasets:

    o SRTM 30m Water Body Data (SWBD) for areas between 60°N to 60°S

    o Modis 250m land-water mask (MOD44W) for areas >60°N and >60°S

    Please note, that due to the temporal coverage of this data (February 2000 for SWBD and 2000-2002 for MOD44W), differences from present water bodies can occur. Further, small lakes and rivers might not be depicted due to the limited spatial resolution of the source data.

Data sources copyright information

TerraSAR-X/TanDEM-X: © *DLR e. V. 2019, Distribution Airbus DS Geo GmbH*

SWBD: © USGS/EROS Data Center 2005

MOD44W: © NASA 2009

Reference publications

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.

Martinis, S., Twele, A., Strobl, C, Kersten, J. and E. Stein. 2013. A multi-scale flood monitoring system based on fully automatic MODIS and TerraSAR-X processing chains. Remote Sensing 5:5598-5619.

Citation

When disseminating data/layers of the TerraSAR-X flood service in e.g. presentations or own map products, please cite the source as follows: © DLR/ZKI 2019