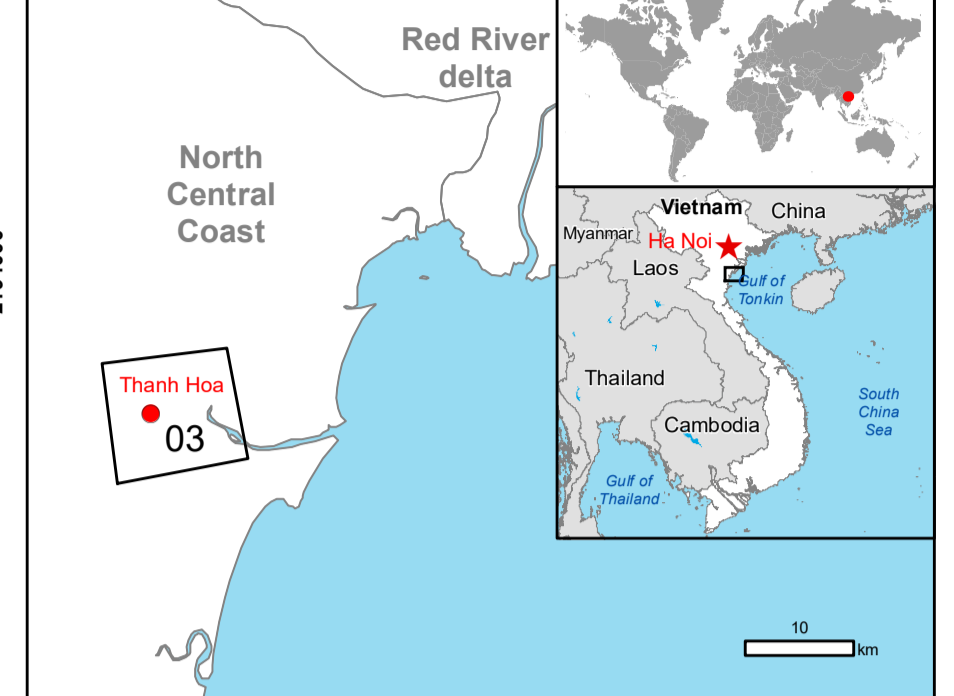




Thanh Hoa - VIETNAM

Flood - Situation as of 04/08/2020

Delineation - Overview Map 01



Cartographic Information

1:23000 Full color A1, 200 dpi resolution
 0 0.475 0.95 1.9 km

Grid: WGS 1984 UTM Zone 48N map coordinate system
 Tick marks: WGS 84 geographical coordinate system

Legend

Class Information	Build-up Area	Hydrography	Infrastructure
Construction (area type)	Residential	Stream	Construction for mining or extraction
General Information	Traffic and communication	Canal	Transportation
Green of Interest	School, university and research	Sea	Primary Road
Group response	Hospital or medical care building	Canal Subject to location	Secondary Road
Place names	Building used as places of worship and for religious activities	River	Car Track
Place name			Long distance railway
			Construction for mining or extraction
			Heterogeneous agricultural areas
			Forest
			Shrub and/or herbaceous vegetation association
			Other

Consequences within the AOI		Unit of measurement	Affected	Total in AOI
		km	km	km
Riverine flood			18	18
Exposed population		Number of inhabitants	26628	
Settlements	Residential Buildings	No.	0	NA
	School, university and research buildings	No.	0	NA
	Hospital or medical care buildings	No.	0	NA
	Buildings used as places of worship and for religious activities	No.	0	NA
	Communication buildings, stations, terminals and associated buildings	No.	0	NA
Transportation	Primary Road	km	1.3	NA
	Secondary Road	km	0.7	NA
	Local Road	km	0.3	NA
	Car Track	km	0.0	NA
	Long distance railway	km	0.0	NA
Facilities	Construction for mining or extraction	km	5.5	NA
Land use	Heterogeneous agricultural areas	km	12.7	NA
	Forest	km	0.1	NA
	Shrub and/or herbaceous vegetation association	km	0.1	NA
	Other	km	5.1	NA

Map Information

Tropical storm Sinlaku hitting north-central Vietnam has brought heavy rainfall, wind and caused urban flooding in Yen Bai city, Chung My district (North Vietnam) and in Thanh Hoa, Vinh and Ha Tinh (Central Vietnam) at the beginning of August with a maximum water height forecasted on 02/08/2020.

The present map shows the flood delineation in the area of Thanh Hoa (Vietnam). The thematic layer has been derived from post-event satellite image using a semi-automatic approach. The estimated geometric accuracy (RMSE) is 2.5 m or better, from native positional accuracy of the background satellite image.

Relevant date records (UTC)

Event	02/08/2020 12:00	Situation as of	04/08/2020 10:34
Activation	03/08/2020 04:11	Map production	05/08/2020

Data sources

Pre-event image: SPOT/67 © Airbus DS (2017), (acquired on 30/07/2017 at 03:04 UTC, GSD 1.5 m, approx. 0% cloud coverage in AoI, 11.9° off-nadir angle), provided under COPERNICUS by the European Union and ESA, all rights reserved.
 Post-event image: COSMO-SkyMed® ASI (2020), distributed by e-GEOS S.p.A. (acquired on 04/08/2020 at 10:34 UTC, GSD 5 m), provided under COPERNICUS by the European Union and ESA, all rights reserved.
 Base vector layers: OpenStreetMap © OpenStreetMap contributors, Wikimapia.org, GeoNames 2015, Globe Land 30 (2010), Global Administrative Areas (2012), refined by the producer.
 Inset maps: JRC 2013, Natural Earth 2012, GeoNames 2013.
 Population data: GHS Population Grid © European Commission, 2019
https://ghsl.jrc.ec.europa.eu/ghs_pop2019.php
 Digital Elevation Model: SRTM (30 m) (NASAUSGS)

Disclaimer

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 Please be aware that the thematic accuracy might be lower in urban and forested areas due to inherent limitations of the SAR analysis technique.

Delivery formats are Layered Geospatial PDF, GeoJPEG and vector (ESRI shapefiles, Google Earth KMZ, GeoJSON).

Map produced by ITHACA released by e-GEOS (ODO).
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