

Situation Analysis Preliminary Report

Floods in Garut, Indonesia

September 2016

Prepared by
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Situation Overview

On the 21st of September 2016 torrential rains triggered floods and landslides on Java Island, Indonesia. Garut regency, West Java, is reported as the worst affected with 33 people killed, 20 missing, and over 6,000 homeless. Just a few days later, on the 24th and 25th of September, flooding was reported in West Nusa Tenggara and East Java, which displaced 2,000 households. Indonesia has faced ongoing floods, flash floods, and landslides around the country since May of 2016. Government agencies and NGOs are providing clean water, food, and shelter ([UN OCHA, 30 Sept 2016](#)).

UNITAR-UNOSAT, on behalf of UN OCHA, activated the International Charter on Space and Major Disasters on the 24 of September 2016 to assist with a satellite based impact assessment covering the flood affected areas. Priority Areas of Interest (AOIs) for satellite imagery acquisition have been selected based on information about the situation on the ground received from UN OCHA. The following UNITAR-UNOSAT analysis provides an overview of the magnitude of the crisis and highlights particularly vulnerable areas for humanitarian aid.

Overview Map of Analysed Districts in the North and Central Part of Garut Regency



Potential Affected Areas per District within Analysed Zones

The following UNITAR-UNOSAT analysis was derived using TerraSAR-X image acquired on the 25th of September 2016 at a spatial resolution of approximately 3m. The analysis provides an overview of the affected area from satellite-detected water extent and saturated soils aggregated by district in the North and Central part of the Garut regency, Jawa Barat province. The analysis accounts for ~ 106,000 Ha of the total area of Garut. The total affected area within the analysed zone is 651 Ha, which is 0.61% of the total analysed area. Karangpawitan district has the highest affected area within our analysed zone, with 121 Ha affected, which is 2.20% of the total district area.

The table below presents the percentage of affected areas within analysed zones by each district in Garut.

Potential affected areas per district within the analysed zones			
Regency/Districts	Analysed Area (Ha)	Affected Area (Ha) within analysed zone	% Affected area within Analysed zone
GARUT	106,141	651	0.61%
BANYURESMI	4,826	101	2.10%
BAYONGBONG	4,547	24	0.52%
BLUBUR LIMBANGAN	8,593	16	0.19%
CIBATU	3,911	40	1.03%
CIBIUK	2,199	24	1.11%
CILAWU	8,002	13	0.16%
GARUT KOTA	3,008	27	0.91%
KADUNGORA	3,902	12	0.31%
KARANGPAWITAN	5,509	121	2.20%
KARANGTENGAH	2,752	5	0.19%
KERSAMANAH	2,381	15	0.62%
LELES	7,070	25	0.35%
LEUWIGOONG	2,416	48	1.99%
MALANGBONG	10,648	26	0.25%
PANGATIKAN	2,155	18	0.84%
PASIRWANGI (*)	5,361	4	0.08%
SAMARANG (*)	5,257	18	0.34%
SELAAWI	3,668	9	0.24%
SUCINARAJA	3,365	9	0.28%
SUKARESMI (*)	3,345	6	0.19%
SUKAWENING	3,731	23	0.63%
TAROGONG KALER	5,262	17	0.32%
TAROGONG KIDUL	1,988	28	1.41%
WANARAJA	2,243	19	0.85%
Grand Total	106,141	651	0.61%

(*) District partially analysed

Potential Affected Population per District within Analysed Zones

The following UNITAR-UNOSAT analysis provides an overview of the affected population, using WorldPop data, from satellite-detected water extent and saturated soils aggregated by district in the North and Central part of the Garut regency, Jawa Barat province. The total affected population within the analysed zone is 16,434, which is ~ 1% of the total population in the analysed area. Karangpawitan district has the highest number of affected population within our analysed zone, with 3,705 people affected, which is 3.14% of the total district population.

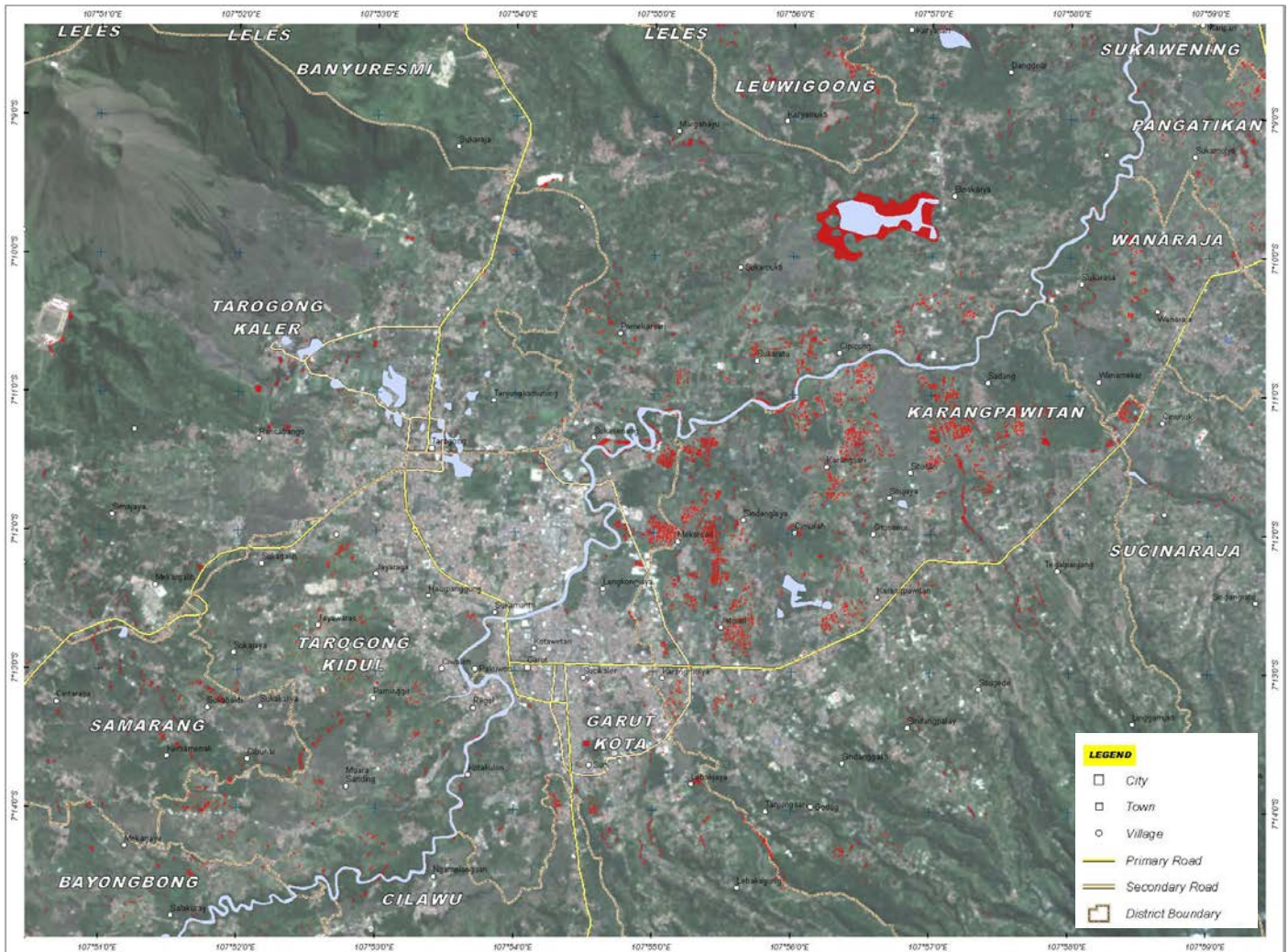
The table below presents the percentage of affected population within analysed zones by each district in Garut.

Potential affected population per district within the analysed zones			
Regency/Districts	Analysed Area Population	Affected Population within analysed zone	% Affected population within Analysed zone
GARUT	1,624,538	16,434	1.01%
BANYURESMI	80,666	1,841	2.28%
BAYONGBONG	94,674	777	0.82%
BLUBUR LIMBANGAN	85,426	309	0.36%
CIBATU	58,447	581	0.99%
CIBIUK	37,748	511	1.35%
CILAWU	85,214	345	0.40%
GARUT KOTA	95,682	1,061	1.11%
KADUNGORA	84,150	455	0.54%
KARANGPAWITAN	117,948	3,705	3.14%
KARANGTENGAH	15,502	27	0.18%
KERSAMANAH	34,557	371	1.07%
LELES	88,338	385	0.44%
LEUWIGOONG	34,131	663	1.94%
MALANGBONG	104,201	389	0.37%
PANGATIKAN	28,476	408	1.43%
PASIRWANGI (*)	58,712	23	0.04%
SAMARANG (*)	88,306	664	0.75%
SELAAWI	24,392	120	0.49%
SUCINARAJA	26,632	168	0.63%
SUKARESMI (*)	39,437	132	0.34%
SUKAWENING	38,570	428	1.11%
TAROGONG KALER	149,965	695	0.46%
TAROGONG KIDUL	118,157	1,953	1.65%
WANARAJA	35,207	423	1.20%
Grand Total	1,624,538	16,434	1.01%

(*) District partially analysed

All completed, current, and future mapping activities done by UNITAR-UNOSAT as well as other satellite mapping groups can be viewed through [GDACS/SMCS](https://www.gdacs.org/satellite-mapping).

All maps and products of UNOSAT are available at: <https://www.unitar.org/unosat/maps/IDN>



DISCLAIMER

The analysis does not cover the entire area of each administrative division, hence the total affected hectare depicts only the extent of the analysis as shown in the map above. The pre flood data used in this analysis was provided by Indonesian Geospatial Information Agency. It is important to note that the analysis has been conducted using RADAR imagery and thus may not accurately estimate the water extent. The analysis has not been verified in the field yet; please send your comments to unosat@unitar.org.