



Sri Lanka Flood situation report (29/05/2017) using TerraSAR-X satellite data and publicly available sources

Draft Prepared by International Water Management Institute (IWMI)

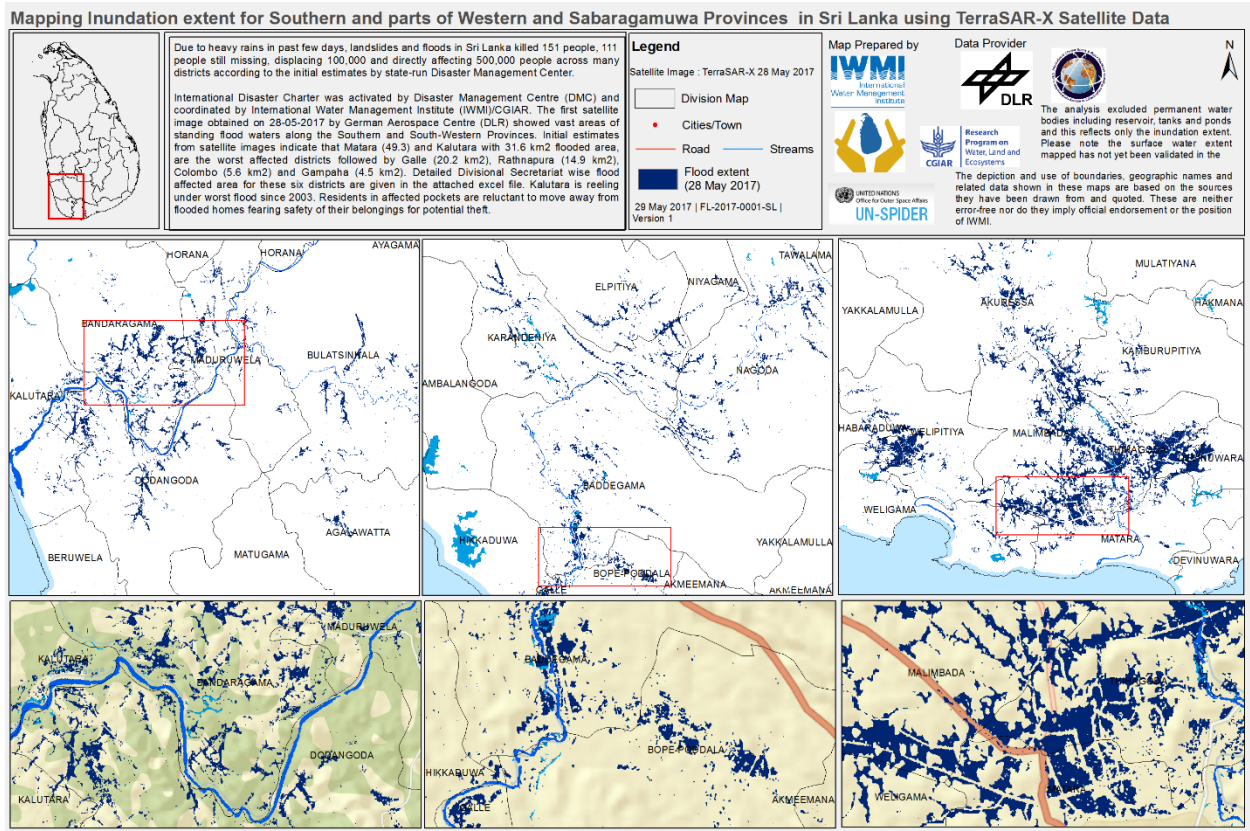
Due to heavy rains in past few days, landslides and floods in Sri Lanka killed 151 people, 111 people still missing, displacing 100,000 and directly affecting 500,000 people across many districts according to the initial estimates by state-run Disaster Management Center.

International Disaster Charter was activated by Disaster Management Centre (DMC) and coordinated by International Water Management Institute (IWMI)/CGIAR. The first satellite image obtained on 28-05-2017 by German Aerospace Centre (DLR) showed vast areas of standing flood waters along the Southern and South-Western Provinces. Initial estimates from satellite images indicate that Matara (49.3) and Kalutara with 31.6 km² flooded area, are the worst affected districts followed by Galle (20.2 km²), Rathnapura (14.9 km²), Colombo (5.6 km²) and Gampaha (4.5 km²). Detailed Divisional Secretariat wise flood affected area for these six districts are given below. Kalutara is reeling under worst flood since 2003. Residents in affected pockets are reluctant to move away from flooded homes fearing safety of their belongings for potential theft.

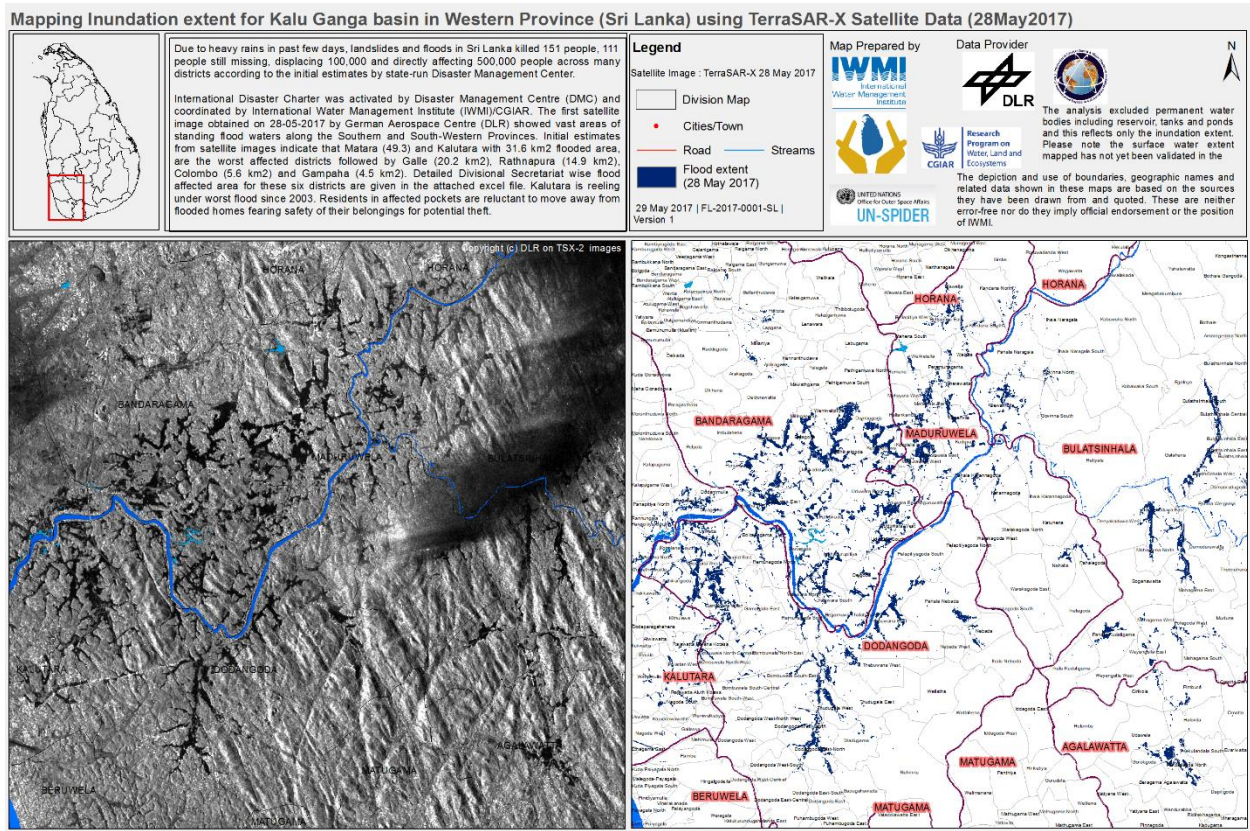
People in the town of Kalutara said that the water levels are still high and don't expect to fall soon. "All access to our village is cut off completely, making it difficult event for anyone to reach," told residents in Kalutara to IWMI. River Kalu Ganga is overflowing the bunds due to excess flow from upstream catchment area. As per meteorological/irrigation department forecast, water levels is expected to rise further within next 36 hours.

Note: Details on the death toll, affected people and forecast information was gathered from public sources.

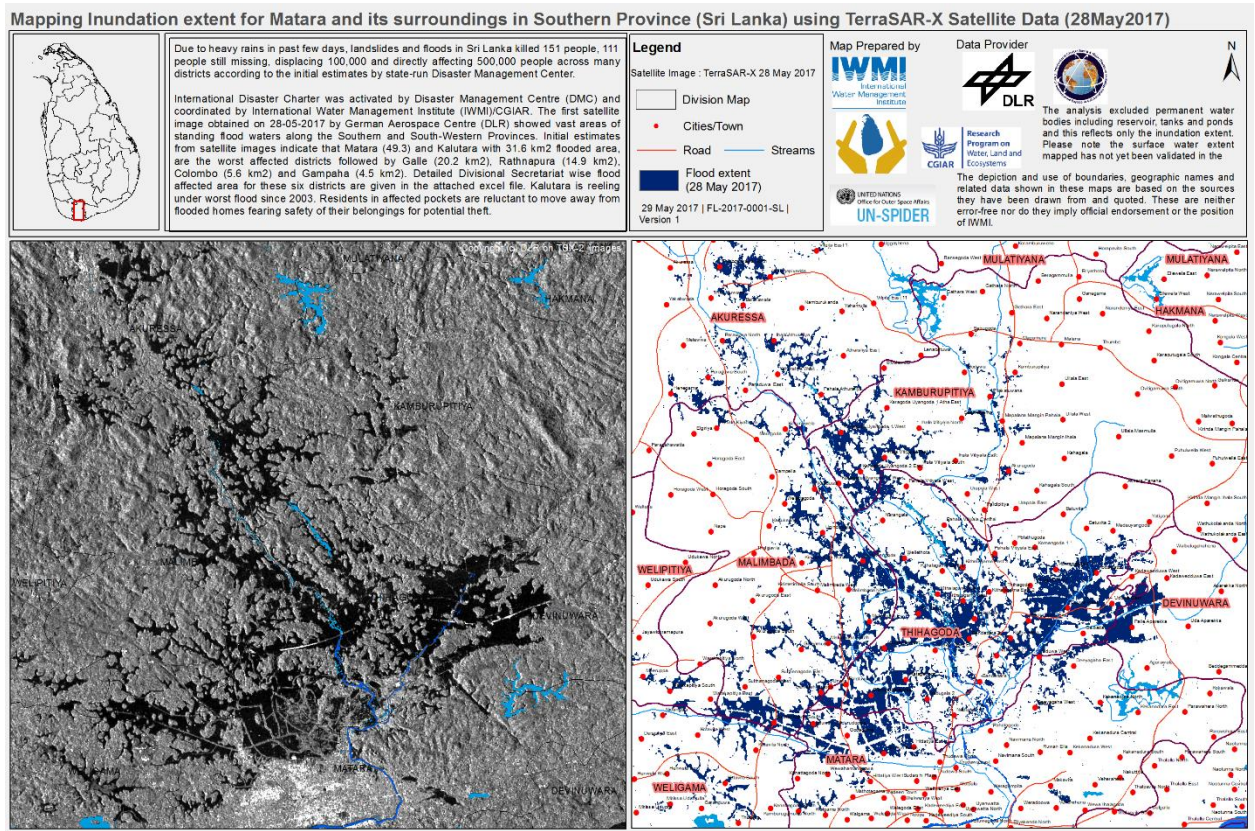
Map 1: Overview of flood situation for Southern parts of Sabaragamuwa and Western Provinces, Sri Lanka



Map 2: Closer view of Kelani river inundation and the Western province, Sri Lanka. (Village boundary was overlaid to capture extent of flooding and details statistics are summarized below)



Map 2: Closer view of Matara and its surroundings of the Southern province, Sri Lanka. (Village boundary was overlaid to capture extent of flooding and details statistics are summarized below)



Estimates of flood affected area using TerraSAR-X satellite data covering six districts of Sri Lanka due to heavy rainfall on 25 May to 26 May 2017

Table 1. District wise flooded area		
Sl. No.	District	Flooded area (km²)
1	Matara	49.3
2	Galle	20.2
3	Kaluthara	31.6
4	Rathnapura	14.9
5	Colombo	5.6
6	Gampaha	4.5

Table 2. Divisional Secretariat Division (DSD) wise flooded area			
Sl. No.	Districts	DSD	Flooded area (km²)
1	Matara	Mulatiyana	0.05
		Akuressa	6.41
		Malimbada	8.77
		Kamburupitiya	4.66
		Hakmana	0.03
		Dikwella	0.07
		Thihagoda	18.15
		Weligama	4.64
		Matara	4.55
		Devinuwara	1.90
		Pitabeddara	0.05
		Welipitiya	4.32
2	Galle	Bentota	1.26
		Elpitiya	2.69
		Niyagama	0.69
		Tawalama	0.12
		Neluwa	0.06
		Nagoda	5.06
		Karandeniya	4.03
		Ambalangoda	0.05
		Balapitiya	0.09
		Hikkaduwa	0.18
		Baddegama	3.54
		Akmeemana	0.04

		Bope-poddala	1.11
		Galle	0.37
		Yakkalamulla	0.00
		Habaraduwa	0.92
3	Kaluthara	Panadura totamuna	0.02
		Bandaragama	8.64
		Horana	0.03
		Bulatsinhala	5.91
		Dodangoda	6.61
		Kalutara	1.88
		Beruwela	0.45
		Matugama	0.80
		Agalawatta	2.49
		Walallawita	1.31
		Maduruwela	3.49
4	Rathnapura	Eheliyagoda	0.19
		Kuruwita	9.33
		Ratnapura	1.30
		Imbulpe	0.00
		Pelmadulla	0.10
		Elapatha	3.09
		Ayagama	0.71
		Kalawana	0.16
5	Colombo	Colombo	0.00
		Kolonnawa	0.01
		Kaduwela	3.22
		Homagama	1.32
		Avissawella	0.97
		Maharagama	0.00
		Nugegoda	0.00
		Moratuwa	0.00
		Kesdewa	0.03
		Dehiwela	0.04

Note:

1. Flooded area were estimated by IWMI from TERRASAR satellite image provided by German Aerospace Agency (DLR) capturing flood situation on 28-05-2017;

2. The estimated statistics excludes permanent water bodies including rivers and large lakes.

3. The estimates obtained from satellite data might not be highly accurate with limitations from cloud contamination and standing flood waters below dense canopy