Briefing Note – 31 May 2017

SRI LANKA
Floods

acaps

Need for international assistance	Not required	Low	Moderate	Significant	Major
		X			

Expected impact	Very low	Low	Moderate	Significant	Major
			X		

Key findings

Anticipated scope and scale

Rains are expected to continue in affected areas into the first week of June. Many dams in the southwest are overflowing or at risk of breaching. The outbreak of dengue fever, with already over twice the number of cases as the same time period in 2016, will be aggravated by damaged health facilities and water logging due to flooding.

Key priorities

- **WASH:** Drinking water, rehabilitation of contaminated water sources.

- **Health:** Rehabilitating health centres, preparing for cholera, diarrhoea, dysentery, and dengue fever outbreaks.

- **Shelter:** Houses destroyed and damaged, particularly in Galle, Kalutara, Matara, and Ratnapura districts.
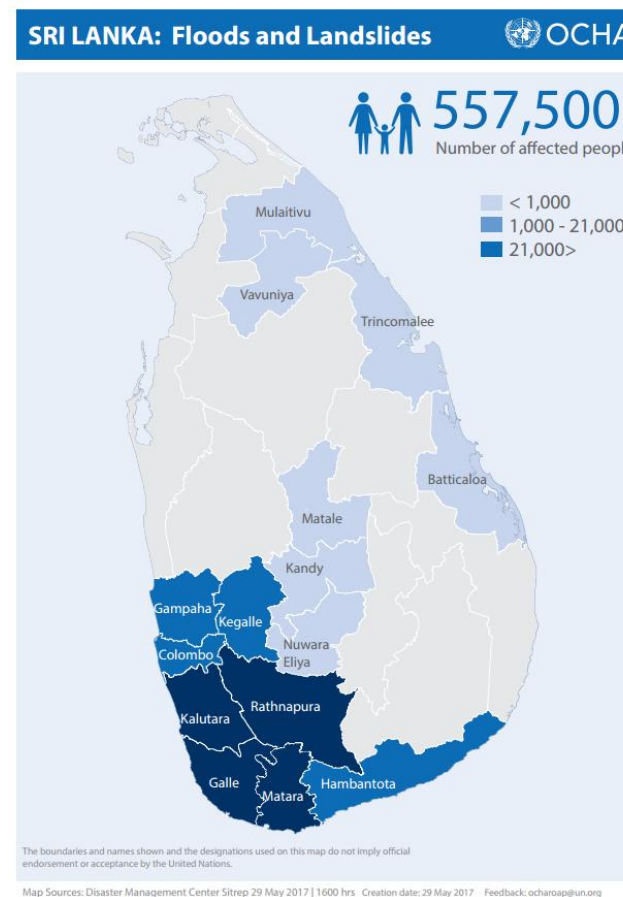
Humanitarian constraints

Roads have been cut off by flooding and landslides in affected areas.

Crisis overview

Heavy rains in southwestern Sri Lanka from 25 May triggered flooding that affected 15 districts, of which Galle, Kalutara, Matara, and Ratnapura were the most severely affected. Over 588,000 people have been affected, 180 killed, and 110 are missing. Landslides and flooding have constrained access to heavily affected areas.

An estimated 40% of those in affected areas do not have access to piped water, and are therefore extremely vulnerable to waterborne diseases such as cholera or diarrhoea.

Source: OCHA

Limitations

Damage to houses is likely underreported.

No needs assessments have yet been conducted.

Crisis impact

Monsoon rainfall reaching as high as 553mm since 25 May has triggered flooding and landslides throughout southwestern Sri Lanka (ACT 29/05/2017). 15 districts are affected by the heavy rains, of which four – Galle, Kalutara, Matara, and Ratnapura are also severely affected by landslides (IFRC 27/05/2017). 47 people were killed in an individual landslide in Agawatte town, Kalutara district (Sri Lanka Red Cross 29/05/2017). Over 588,000 people have been affected, 180 people have been killed, and 110 people are missing. More than 804,900 people have been evacuated to 368 safe locations (IOM 30/05/2017; DMC Sri Lanka 29/05/2017). Over 1,000 people have been rescued by the Sri Lankan military and police (UN 29/05/2017).

Rain is expected to continue in affected areas into the first week of June (IFRC 29/05/2017). This raises the risk of further flooding and landslides. The monsoon season typically ends in September. The Bogoda Dam in Kalutara district is at high risk of collapse and people in Panadura South, Panadura North, Wadduwa, Bandaragama, Moronthuduwa and Aguruwathota sub-districts have been ordered to evacuate immediately (Daily News 29/05/2017; UN 29/05/2017). Flood-resistant dams along many rivers in affected areas are also at risk of collapse (UNICEF 29/05/2017).

Rainfall impact by district, 29 May 2017

District	No. of affected	No. of missing	No of deaths	Houses Damaged	Houses Destroyed
Trincomalee	696	0	0	188	3
Batticaloa	20	0	0	3	1
Gampaha	16,133	0	4	55	2
Kalutara	107,906	57	54	805	91
Colombo	20,172	3	0	30	7
Galle	151,360	12	12	467	161
Hambantota	10,368	0	5	417	37
Matara	162,083	10	24	2,103	243
Mullaitvu	72	0	0	22	5
Vavuniya	102	0	0	22	1
Kandy	20	0	0	3	1
Matale	31	0	0	6	0
Nuwara Eliya	392	0	0	10	0
Kegalle	5,799	0	4	58	9
Ratnapura	112,928	28	77	1,140	79
Total	588,082	110	180	5,329	640

Source: DMC 29/05/2017

WASH: Sri Lanka's water minister said that 40% of those affected, or approximately 217,000 according to estimates of those affected at the time, did not have access to piped drinking water (Livemint 29/05/2017). According to the 2012 census, treating shared water sources such as wells is therefore an urgent priority.

Health: At least 16 hospitals have been damaged and required partial or full evacuation. This includes the main referral unit of Ratnapura, the Provincial General Hospital, which was totally inundated (UN 30/05/2017; WHO 28/05/2017).

Outbreaks of cholera, diarrhoea, and dysentery are a threat following flooding. High cases of diarrhoea, acute respiratory disease, and skin diseases have been observed in previous flooding events (OCHA 26/05/2016). Rates of Dengue fever have been above average in 2017, and its potential to spread increases with flooding (Reuters 29/05/2017).

Shelter: At least 640 houses have been completely destroyed and over 5,300 damaged. Over 76,900 people have been evacuated to 368 safe locations (DMC Sri Lanka 29/05/2017).

Livelihoods: Shops and small businesses have been completely inundated (CNN 28/05/2017). Agricultural land has been swamped and crops have been damaged in Hambantota district (IWMI 29/05/2017; Reuters 29/05/2017).

Education: Schools have been closed in heavily affected areas. According to the Ministry of Education, schools in Colombo, Galle, Gampaha, Hambantota, Kalutara, Kegalle, Matara, and Ratnapura will remain closed until 2 June (UN 29/05/2017).

Vulnerable groups affected

Children and the elderly are particularly vulnerable in flooding situations. It is estimated that over 141,400 children are among those affected (UNICEF 29/05/2017).

Humanitarian and operational constraints

Many affected communities have become unreachable as roads are totally cut off by flooding (Save the Children 27/05/2017; IFRC 27/05/2017; Sri Lanka Red Cross 29/05/2017). Roads have been cut off by flooding, and landslides have been observed in Galle, Kalutara, Matara, and Ratnapura districts (IFRC 27/05/2017). Considerable access issues have been reported in Ratnapura and Matara districts (Reuters 27/05/2017; Sri Lanka Red Cross 29/05/2017).

As of 28 May the Ratnapura–Kalwana road, Deniyaya–Morawaka, and Bulathsinghala–Pahiyangla roads were blocked. Access was virtually cut off to Athwalthota, Kalutara district and Kalawana area, Gampaha district (Government 29/05/2017).

Aggravating factors

Dengue fever

Risk of Dengue fever is at its highest during the monsoon season. Nearly 55,000 cases of Dengue fever have been reported across Sri Lanka in the first five months of 2017, which is more than double the incidence rate in the same time period in 2016, where there were about 19,000. In the most flood-affected districts, Galle has reported 2,107 cases, Kalutara 3,190, Matara 1,856 cases, and Ratnapura 2,406 cases in the beginning of May (Government 01/05/2017).

Housing Types

Semi-durable housing material such as clay, metal sheets, or straw is less resistant to flooding damage. 18.6% of Sri Lankan households use such materials (Government 2012). Among the most affected districts, 14.1% of homes in Galle have semi-durable walls, 21.7% of homes in Kalutara, 13.3% in Matara, and 17.6% in Ratnapura (Government 2012).

Population density

Higher population density exacerbates the impact of flooding. Population density in the four most affected districts is 658/km² in Galle, 774/km² in Kalutara, 641/km² in Matara, and 336/km² in Ratnapura (Housing Census 2012; Area Census 2012).

Population densities in flood-affected districts

District	Population Density	District	Population Density
Batticaloa	202 per km²	Colombo	3,438 per km²
Galle	774 per km²	Gampaha	1,719 per km²
Hambantota	240 per km²	Kalutara	641 per km²
Kandy	716 per km²	Kegalle	499 per km²
Matale	248 per km²	Matara	336 per km²
Nuwara Eliya	417 per km²	Mullaitvu	38 per km²
Ratnapura	336 per km²	Trincomalee	150 per km²
Vavuniya	92 per km²		

Source: Housing Census 2012; Area Census 2012

Drought

Over one million people are affected by drought throughout Sri Lanka, but this does not coincide with flood-affected areas. The response to drought is likely stretching government resources (DMC 24/05/2017).

Key characteristics

Population: Sri Lanka: 20,39,439. Galle 1,063,334, Kalutara 1,221,948, Matara 814,048, and Ratnapura 1,088,007 (Government 2012).

Rural–urban breakdown: Sri Lanka: 73.4% rural population. Galle: 85.7%, Kalutara: 88%, Matara: 85.4%, Ratnapura: 81.7% (Government 2012).

Food security: 6.7% of Sri Lanka's population are unable to meet a daily calorie intake of 2,030 kcal due to low income. (World Bank 08/2015).

Poverty: Estimated population living below the official poverty line: Galle 8.7%, Kalutara 5.1%, Matara 9.2%, and Ratnapura 11.2% (Government 2012)

Nutrition: 15% of children under five are stunted (2012) (Global Nutrition Report 2014).

Health: Sri Lanka has an infant mortality rate of 8 per 1,000 live births, an under-five mortality rate of 10 per 1,000 live births, and a maternal mortality ratio of 30 per 100,000 live births (World Bank 2015).

WASH: 89.1% of households in Sri Lanka have piped water to their house, 90.3% in Galle, 94.3% in Matara, 92.8% in Kalutara, and 80.7% in Ratnapura (Government 2012).

Lighting and cooking: 74% of households use solid fuels for cooking. 64% use electricity for lighting, 35% use kerosene (Clean Cookstoves 2015).

Literacy: Sri Lanka: 96% of the population is literate (male: 97%; female: 95%) (Government 2012).

Response capacity

Local and national response capacity

The Sri Lankan Ministry of Foreign Affairs activated the Emergency Response Unit to coordinate response. National response is coordinated by the Disaster Management Centre in conjunction with the relevant district and divisional secretariats (Sri Lanka MFA 29/05/2017; Government 29/05/2017). The Sri Lankan military has deployed over 2,000 personnel to assist in rescue, aid delivery, and road clearing (Government 29/05/2017). Galle and Kalutara have provided ferry and boat services to assist stranded people (Sri Lanka Red Cross 29/05/2017).

International response capacity

The government has appealed to the United Nations, International Search and Rescue Advisory Group (INSARAG), and neighbouring countries for assistance. INSARAG and the UN have conducted rescue missions and assisted in overcoming access issues (Sri Lanka MFA 29/05/2017).

UNICEF is providing WASH and NFI assistance. The World Health Organization is supporting response. WFP and UNDP are supporting the Disaster Management Centre with information management (UN Resident Coordinator 27/05/2017). IOM have deployed rapid assessment teams (IOM 30/05/2017). OCHA is also supporting by providing human resources for coordination with other partners, both humanitarian and governmental (UN Resident Coordinator 27/05/2017). The Red Cross has deployed to Colombo, Galle, Kalutara, Matara and Ratnapura districts (IFRC 27/05/2017).

Information gaps and needs

No needs assessment has been conducted and projections of people in need are based on demographic data from the 2012 census and historical flood and landslide statistics. A government-led needs assessment is expected to be conducted next week (UNICEF 29/05/2017).

Lessons learned

- Drinking water and NFIs were identified as the most immediate needs in previous flooding emergencies in the southeast (UN 29/05/2017).

- Needs assessments should include existing knowledge, such as censuses, in evaluations of areas that are experiencing access issues (ALNAP 2014).

- Loss of assets, shelter, impact on livelihoods, and deaths to breadwinners create long term impacts (ALNAP 2014).

- Well trained and locally positioned teams have been effective in response for immediate rapid field assessments and delivery of emergency relief items in previous flooding crises (Red Cross 07/09/2012).

- Affected communities' ownership of projects saw considerable success in 2012 flood response as people were more motivated to carry them out (Red Cross 07/09/2012).

- Skin diseases, diarrhoea, and acute respiratory infections were the most prevalent health concerns in the May 2016 floods (OCHA 26/05/2016)