

# Package ‘Ditwah’

May 7, 2026

**Title** Ditwah Storm Data and Tools for Storm Monitoring and Early Warning November 2025, Sri Lanka

**Version** 1.0.1

**Description** The Ditwah storm began impacting Sri Lanka on 25 November 2025. Ditwah provides a collection of tidy, well-structured datasets to support storm data management, monitoring, and early warning applications in Sri Lanka. The publicly available data were converted to tidy data format for easy analysis. The package processes weather data, flood data and situation report data (families affected, etc.). The package also includes functions for analyzing river level progression and load dashboard visualizations to enhance situational awareness. This is also developed for educational purposes to support learning in data wrangling, visualization, and disaster analytics.

**License** GPL (>= 3)

**Encoding** UTF-8

**RoxygenNote** 7.3.3

**Imports** dplyr, tibble

**Depends** R (>= 4.1.0)

**LazyData** true

**NeedsCompilation** no

**Author** Thiyanga S. Talagala [aut, cre] (ORCID:  
<<https://orcid.org/0000-0002-0656-9789>>)

**Maintainer** Thiyanga S. Talagala <ttalagala@sjp.ac.lk>

**Repository** CRAN

**Date/Publication** 2026-01-12 06:11:15 UTC

## Contents

compute_flood_stats . . . . .	2
ditwah_3hr_weather_data . . . . .	2
flood_water_level . . . . .	3
load_dashboard . . . . .	4
realtime_waterlevel_kelani_ganga . . . . .	4
situation_report_30NOV1600 . . . . .	5
weather_report . . . . .	6

**Index**

7

---

compute\_flood\_stats     *Computes number of hours in alert, minor and major levels starting from 26 Nov 2025*

---

**Description**

Classify flood levels as alert, minor and major and compute the total number of hours in each state

**Usage**

```
compute_flood_stats(data, DateTime, RiverWaterLevel, alert, major, minor)
```

**Arguments**

data	data frame with variables date and time, river water level, alert level, major flood level and minor flood level
DateTime	Variable name corresponds to Date and Time (%Y-%m-%d %H:%M)
RiverWaterLevel	Variable name corresponds to the River Water Level
alert	Alert level numeric value
major	Major flood level numeric value
minor	Minor flood level numeric value

**Value**

A list containing a tibble including new variable called state classifying flood level and total number of hours spent in each state

---

ditwah\_3hr\_weather\_data  
*Ditwah storm 3 hour weather station data – November 2025, Sri Lanka*

---

**Description**

This dataset contains weather station measurements collected during the Ditwah storm in November 2025 in Sri Lanka. It includes rainfall, temperature, humidity, and a summary report from each station.

**Usage**

```
ditwah_3hr_weather_data
```

**Format**

A data frame with 92 rows and 7 columns:

**Station\_ID** Unique identifier for each weather station

**Station\_Name** Name of the weather station

**Report\_Time** Date and time of the report (YYYY-MM-DD HH:MM format)

**Rainfall\_mm** Measured rainfall in millimeters during the reporting period

**Temperature\_C** Measured temperature in degrees Celsius

**RH\_%** Relative humidity percentage at the reporting time

**report** Grouping variable to report records

**Source**

Department Of Meteorology, Sri Lanka (<https://meteo.gov.lk/>)

---

flood_water_level	<i>Ditwah storm flood monitoring data</i>
-------------------	---

---

**Description**

This dataset contains hydrological and rainfall measurements recorded at gauging stations during the Ditwah storm in November 2025, Sri Lanka. It includes water levels, flood alert thresholds, rainfall measurements, and additional operational remarks used for monitoring river conditions.

**Usage**

flood\_water\_level

**Format**

A data frame with observations on the following 15 variables:

**Report\_Date** Date on which the hydrological report was recorded (YYYY-MM-DD).

**Report\_Time** Time at which the report was generated.

**River\_Basin** Name of the main river basin associated with the observation site.

**Tributary\_River** Name of the tributary river connected to the gauging station.

**Gauging\_Station** Name or identifier of the station where hydrological measurements were taken.

**Unit** Unit of measurement used for reporting water level (e.g., meters).

**AlertLevel** Water level threshold at which an alert is declared.

**MinorFloodLevel** Water level threshold indicating the onset of minor flooding.

**MajorFloodLevel** Water level threshold indicating the onset of major flooding.

**Remarks** Additional notes, operational comments, or contextual information related to river or weather conditions.

**WaterLevelRising\_or\_Falling** Indicator describing whether the current water level is rising, falling, or stable.

**Water\_Level\_Time** Specific time at which the corresponding water level measurement was taken.

**Water\_Level** Recorded water level at the specified measurement time.

**RFmm** Rainfall amount (in millimetres) measured during the specified recording period.

**RFmm\_measured\_at** Time at which the rainfall measurement (RFmm) was taken.

**Water\_Level\_DateTime** Recorded water level at the specified measurement time in Date and Time format

### Source

Disaster Management Center, Sri Lanka (Based on River Water Leve and Flood Warning reports at [https://www.dmc.gov.lk/index.php?option=com\\_dmcreports&view=reports&Itemid=277&report\\_type\\_id=6&lang=en](https://www.dmc.gov.lk/index.php?option=com_dmcreports&view=reports&Itemid=277&report_type_id=6&lang=en))

---

load_dashboard	<i>Load dashboard</i>
----------------	-----------------------

---

### Description

Load to explore weather- and disaster-related information associated with the Ditwah Storm

### Usage

load\_dashboard()

### Value

open dashboard

---

realtime_waterlevel_kelani_ganga	<i>Real-time water level data for Kelani river basin</i>
----------------------------------	--

---

### Description

This dataset contains real-time rainfall and river water-level observations from hydrometric stations in the Kelani river basin. The data were obtained from dashboard by Hydrology and Disaster Management Division, Irrigation Department, Sri Lanka.

### Usage

realtime\_waterlevel\_kelani\_ganga

**Format**

A data frame with the following 10 variables:

**Date** Date of the observation

**Time** Hour of the day

**RiverBasin** Name of the river basin.

**HydrometricStation** Name of the hydrometric (gauging) station.

**Rainfall\_mm** Rainfall recorded at the station (in millimetres).

**RiverWaterLevel** Observed river water level.

**RiverWaterLevel\_Unit** Unit of measurement for the water level (e.g.,m, ft).

**Alert\_level** Official alert level corresponding to the observed water level.

**Minor\_Flood\_Level** Threshold level that triggers a minor flood alert.

**Major\_Flood\_level** Threshold level that triggers a major flood alert.

**Source**

Hydrology and Disaster Management Division, Irrigation Department, Sri Lanka (accessed: 30 Nov 2025)

---

situation\_report\_30NOV1600

*Disaster impact summary by district on 2025.11.30 at 16.00 p.m*

---

**Description**

This dataset is part of the package to support real-time monitoring, analysis, and visualisation of disaster impacts. The data have been cleaned and transformed into a tidy format for ease of use in statistical and graphical applications.

**Usage**

situation\_report\_30NOV1600

**Format**

A data frame with one row per district and the following variables:

**Districts** Character. Name of the administrative district.

**Families** Integer. Number of families affected in the district.

**Persons** Integer. Total number of persons affected.

**Deaths** Integer. Number of confirmed deaths reported.

**Missing** Integer. Number of individuals reported missing.

**Safety\_centres** Integer. Number of active safety centres operating in the district.

**Families\_safetycentres** Integer. Number of families currently residing in safety centres.

**Persons\_safetycentres** Integer. Number of individuals currently residing in safety centres.

## Details

This dataset provides a district-level summary of the impacts of a disaster event in Sri Lanka. It includes the number of affected families, persons, deaths, missing individuals, and details of safety centres established for relief and shelter. Situation Report on 2025.11.30 at 16.00 p.m

## Source

Disaster Management Centre, Sri Lanka

## Examples

```
# Load the data
data(situation_report_30NOV1600)

# View the first few rows
head(situation_report_30NOV1600)
```

---

weather_report	<i>Daily rainfall data during the Ditwah storm period</i>
----------------	---

---

## Description

This dataset contains daily rainfall information downloaded from the Department of Meteorology, Sri Lanka. The data includes station details, reporting times, and recorded rainfall amounts.

## Usage

```
data(weather_report)
```

## Format

A data frame with the following columns:

**Date\_downloaded** Date on which the data was downloaded (YYYY-MM-DD).

**Reporting\_Time** Time of rainfall reporting (HH:MM).

**Type** Type of station (e.g., "Rainfall", "Agro", etc.).

**Name** Name of the meteorological or rainfall station.

**Daily\_Rainfall\_mm** Recorded daily rainfall in millimetres.

## Source

Department of Meteorology, Sri Lanka <https://meteo.gov.lk/>

# Index

- \* **SriLanka**

- weather\_report, 6

- \* **datasets**

- ditwah\_3hr\_weather\_data, 2

- flood\_water\_level, 3

- realtime\_waterlevel\_kelani\_ganga,  
4

- situation\_report\_30NOV1600, 5

- weather\_report, 6

- \* **meteorology**

- weather\_report, 6

- \* **rainfall**

- weather\_report, 6

compute\_flood\_stats, 2

ditwah\_3hr\_weather\_data, 2

flood\_water\_level, 3

load\_dashboard, 4

realtime\_waterlevel\_kelani\_ganga, 4

situation\_report\_30NOV1600, 5

weather\_report, 6