

SRI LANKA

**Drought Monitoring for Sri Lanka: Spatial Extent and Temporal
Evolution during the 2016-17 Drought**

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Drought is the most common disaster in Sri Lanka with the largest number of impacted persons. While the present response is substantially on post-disaster relief provision, prior disaster risk management and adaptation to mitigate the impacts of hazards is better all around. Such risk management and adaptation needs anticipation of the spatial and temporal variation of drought through the use of meteorological and hydrological data. However, meteorological data is not freely available and exorbitantly priced. As an alternative, we see to demonstrate the use of satellite derived data which is free and accessible in time.

In this paper, we investigate (a) the quality of the satellite based rainfall data in comparison with ground observations for one of the most severely droughts affected districts – Polonnaruwa, (b) use a drought index to develop a comparison of the current drought in Polonnaruwa with those in the recent past and (c) map the spatial extent of rainfall anomalies across Sri Lanka.

We show that (a) the satellite based data quality is adequate for most drought monitoring in Sri Lanka, (b) the 2016/2017 drought in Polonnaruwa is of medium-intensity drought and (c) drought in Sri Lanka was built up over 2016. Drought can be punctuated by floods in some places – it is only by considering monthly or finer scale data that we could narrow down the impact of these high rainfall events. In general, the use of satellite based drought monitoring protocols are shown to be viable for Sri Lanka.