CatRaRE, V.2023.01 – Field Description

Field Name	Example	Description	Datenquelle
CatVersion	T5_Eta_2023.01	Version of the catalogue	
KEY_FIELD	T5_Eta_2437	Type of catalogue and event ID	RADKLIM RW data (1h precipitation sum), DOI: 10.5676/DWD/RADKLIM_RW_V2017.002
Event_ID	2437	Event ID	
Start_Time	200208221750	Start time of the event in UTC (JJJJMMTThhmm).	
End_Time	200208221850	End time of the event in UTC (JJJJMMTThhmm).	
Date_START	22.08.2002 17:50	Date and time of the start of the event (DataTime Format)	
Date_END	22.08.2002 18:50	Date and Time of the end of the event (DataTime Format)	
Duration	1	Significant duration [h] of the event	
Area	26	Number of affected RADKLIM pixels	
Area_LAEA	23,9	Area [km²] of the event (according to LAEA projection)	
Area_in_G	26	Number of affected RADKLIM pixels in Germany	
AShare_in_G	100	Proportion of the event area [%] in Germany	
RRmax_in_G	1	Information (Yes -1/No - 0), whether the maximum precipitation is in Germany	
x_RRmax	748	X-Value of RRmax in the RADKLIM-grid	
y_RRmax	654	Y-Value of RRmax in the RADKLIM-grid	
x_RRmaxPRJ	304538	X coordinate of RRmax in stereographic projection (RADKLIM natives Format)	
y_RRmaxPRJ	-4104645	Y coordinate of RRmax in stereographic projection (RADKLIM natives Format)	
AGS_RRmax	12071028	Official Municipality Key of RRmax	Administrative areas 1 : 250 000 (VG250), © GeoBasis-DE / BKG 2020, outside Germany: © EuroGeographics 2020
Country_RRmax	Deutschland	Country of RRmax	
BDL_RRmax	Brandenburg	State of RRmax	
LKS_RRmax	Spree-Neiße	District of RRmax	
GMD_RRmax	Briesen	Municipality of RRmax	
Eta	4,61	Extremity: Measure considering return period (T) as well es affected area (A) of an event $$Eta = \frac{\sum_{i=1}^{n} log10(T_i)}{n} \frac{\sqrt{A}}{\sqrt{\pi}} = \overline{T_{log}} \cdot r_{eff}$$	RADKLIM RW data (1h precipitation sum), DOI: 10.5676/DWD/RADKLIM_RW_V2017.002 KOSTRA data: DWD Climate Data Center (CDC): Grids of return periods of heavy precipitation (design precipitation) over Germany (KOSTRA-DWD), version 2020.
RRmax	59	Maximum precipitation [mm] within the event zone	
RRmean	34,78	Mean precipitation [mm]: Mean precipitation of all RADKLIM pixels within the event zone	
Tmax	>> 100	Maximum return period [a] calculated with coefficients based on RADKLIM RW 2017.002: Maximum return period within the event zone (">100": return period > 100 years; ">>100": return period > 1000 years)	
TmaxKOSTRA	>100	Maximum return period [a] calculated with coefficients based on KOSTRA DWD2020: Maximum return period within the event zone (">100": return period > 100 years; ">>100": return period > 1000 years)	

Tmean	40	Mean return period [a] calculated with coefficients based on RADKLIM RW 2017.002: Mean return period of all RADKLIM pixels within the event zone (">100": return period > 100 years; ">>100": return period > 1000 years)	
TmeanKOSTRA	38	Mean return period [a] calculated with coefficients based on KOSTRA DWD2020: Mean return period of all RADKLIM pixels within the event zone (">100": return period > 100 years; ">>100": return period > 1000 years)	
SRImax	9	Maximum heavy precipitation index (in German: Starkregenindex SRI) according to Schmitt calculated with coefficients based on RADKLIM RW 2017.002: Maximum of SRI within the event zone (Range [0,12])	
SRImax_KOSTRA	8	Maximum heavy precipitation index (in German: Starkregenindex SRI) according to Schmitt calculated with coefficients based on KOSTRA DWD2020: Maximum of SRI within the event zone (Range [0,12])	
SRImean	5	Mean heavy precipitation index (in German: Starkregenindex SRI) according to Schmitt calculated with coefficients based on RADKLIM RW 2017.002: Mean SRI of all RADKLIM-pixel with the event zone (Range [0,12])	
SRImean_KOSTRA	5	Mean heavy precipitation index (in German: Starkregenindex SRI) according to Schmitt calculated with coefficients based on KOSTRA DWD2020: Mean SRI of all RADKLIM-pixel with the event zone (Range [0,12])	
MPP_flag	0	Information (yes - 1/no - 0), whether RRmax is higher than 4*100a of the precipitation sum	
WL_START	38	Number of the objective weather type at the start day of the event	Objective weather type classification of DWD https://www.dwd.de/DE/leistungen/wetterlagenklassifikation/ wetterlagenklassifikation.html
WLc_START	SOZZF	Label of the objective weather type at the start day of the event	
WL_END	38	Number of the objective weather type at the end day of the event	
WLc_END	SOZZF	Label of the objective weather type at the end day of the event	
V3_RRmax	12	21-days antecedent precipitation index in the RRmax pixel	
V3_MIN	9	21-days antecedent precipitation index - Minimum within the event zone	
V3_AVG	11,3	21-days antecedent precipitation index - Mean within the event zone	
V3_MAX	14	21-days antecedent precipitation index - Maximum within the event zone	RADKLIM RW data (1h precipitation sum), DOI: 10.5676/DWD/RADKLIM_RW_V2017.002
V4_RRmax	35	30-days antecedent precipitation index in the RRmax pixel	
V4_MIN	29	30-days antecedent precipitation index - Minimum within the event zone	
V4_AVG	34,6	30-days antecedent precipitation index - Mean within the event zone	
V4_MAX	41	30-days antecedent precipitation index - Maximum within the event zone	
BVLK_RRmax	44	Population in the RRmax pixel	Germany: Zensus2011 (100-m-Raster), © Statistisches Bundesamt, Wiesbaden 2015; outside Germany: GEOSTAT2011 (1-km-Raster), © Eurostat, EFGS
BVLK_Summe	3209	Population within the event zone	GEOSTAT2011 (1-km-Raster), © Eurostat, EFGS
BVLK_D1km2	112	Mean population density per 1km² within the event zone	
BVLK_DE_Summe	2879	Population within the German part of the event zone	Zensus2011 (100-m-Raster), © Statistisches Bundesamt, Wiesbaden 2015
BVLK_DE_D1km2	96	Mean population density per 1km² within the German part of the event zone	
SDL_RRmax	2,8	Degree of settlement [%] (Proportion of built-up area, only settlements) in the RRmax pixel	The European Settlement Map 2016 (100-m-Raster), © European Union, Copernicus Land Monitoring Service 2016, European Environment Agency (EEA)
SDL_GRAD	3,7	Degree of settlement [%] within the event zone (proportion of built-up area)	

SDL_MAX	68,7	Maximum degree of settlement on a 100m grid within the event zone	
VSGL_RRmax	5	Degree of sealing [%]: Percentage of sealed area including road infrastructure	The Imperviousness Density 2015 (100-m-Raster), © European Union, Copernicus Land Monitoring Service 2018, European Environment Agency (EEA)
VSGL_GRAD	4,6	Degree of sealing [%] within the event area	
VSGL_MAX	90	Maximum degree of sealing on a 100m grid within the event zone	
CLC_RRmax	211	CORINE land use class in the RRmax pixel	CORINE LAND COVER 2000, 2006, 2012, 2018 - data - dependent on the date of the event (100-m-grid), © European Union, Copernicus Land Monitoring Service 2018
CLC_DOMIN	211	dominating CORINE land use class within the event zone	
SRTM_RRmax	64	mean elevation [m] above sea level in the RRmax pixel	SRTM 3 digital elevation model, Void Filled (3-arcsecond-grid), © USGS 2016
SRTM_MIN	53	minimum elevation [m] above sea level in the event zone	
SRTM_AVG	61,4	mean elevation [m] above sea level in the event zone	
SRTM_MAX	79	maximum elevation [m] above sea level in the event zone	
TPI_RRmax	0	TPI (Topographic Position Index, 2km circular neighbourhood) [m] - Mean in the RRmax Pixel within Germany	Germany: DGM -Digital terrain model (50-m-grid), © GeoBasis-DE / BKG 2015
TPI_MIN	-1,8	TPI (Topographic Position Index, 2km circular neighbourhood) [m] - Minimum in the event zone within Germany	
TPI_AVG	0,2	TPI (Topographic Position Index, 2km circular neighbourhood) [m] - Mean in the event zone within Germany	
TPI_MAX	8,6	TPI (Topographic Position Index, 2km circular neighbourhood) [m] - Maximum in the event zone within Germany	

Note: RADKLIM-pixel = 1 km^2 in polar stereographic projection (not equal-area)