

## References

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- Abdullah H. M., (2014), "Standardized precipitation evapotranspiration index (SPEI) based drought assessment in Bangladesh", Proceedings of 5<sup>th</sup>International Conference on Environmental Aspects of Bangladesh, PP 40-42.
- Achugbu and Anugwo, (2016), "Drought Trend Analysis in Kano using Standardized Precipitation Index", FUYOYE Journal of Engineering and Technology, Volume 1(1), ISSN: 2579-0625, PP 2579-0617.
- Adnan S., Ullah K., Shuanglin L., Gao S., Khan A. H., and Mahmood R., (2018), "Comparison of various drought indices to monitor drought status in Pakistan", Climate Dynamics, Volume 51(5-6), doi: 10.1007/s00382-017-3987-0, PP 1885–1899.
- Alam M., and Sarkar T., (2014), "Precipitation Distribution and Erosivity in Bangladesh: 1981-2010", European academic research Volume 1 (12), PP 5167-5177.
- Arnoldus H.M., (1980), "An Approximation of Rainfall Factor in the Universal Soil Loss Equation in Assessment of Erosion, De Boodt M., Gabriels D. (Eds.), John Wiley & Sons, Chichester, PP 127-132.
- Awasthi M. P., (2023), "Mapping and analyzing temporal variability of spectral indices in the lowland region of Far Western Nepal", Water Practice & Technology, PP 1 - 18, doi: 10.2166/wpt.2023.180.
- Aziz A., Mudassar U., Mehwish S. K., Muhammad N. J., Hailiang G., Muhammad M., Suhaib Bin F., Imran I. and Shaikh A., (2018), "Assessment of drought conditions using HJ-1A/1B data: a case study of Potohar region, Pakistan", Geomatics, Natural Hazards and Risk, Volume 9 (1), PP 1019-1036  
doi: 10.1080/19475705.2018.1499558
- Babu C. M., Hemalatha T and Naik B R., (2016), "Comparison of remote sensing based indices for Drought monitoring in Anantapur", International Journal of Applied Research, Volume 2 (1), PP 449-456.
- Bazrafshan O., Farzad Parandin F., and Farokhzadeh B., (2016), "Assessment of Hydro-meteorological Drought Effects on Groundwater Resources in Hormozgan Region-South of Iran", ECOPERSIA, Volume 4(4), PP 1569-1584.
- Beguéría S., Vicente-Serrano S. M. and Angulo M. (2010), "A multi-scalar global drought data set: the SPEI base: a new gridded product for the analysis of drought

variability and impacts”, Bulletin of American Meteorological Society, Volume 91, PP 1351–1354.

Boudad B., Sahbi H., and Manssouri I., (2017), “Analysis of meteorological and hydrological drought based in SPI and SDI index in the Inaouen Basin (Northern Morocco)”, Journal of Materials and Environmental Sciences, ISSN 2028-2508, Volume 9 (1), PP 219-227.

Chen Shien Tsung, Chun K. and Yu Pao-Shan, (2009), “Historical Trends and Variability of Meteorological Droughts in Taiwan”, Hydrological Sciences Journal, Volume 54(3), PP 430-441. Doi: 10.1623/Hysj.54.3.430.

Choudhary S., Garg P.K., and Ghosh S.K., (2013), “Drought Analysis using Digital Image Processing & Meteorological Data”, International Journal of Advanced Remote Sensing and GIS, Volume 2(1), PP 280-302.

Das S., Choudhury M. R., Gandhi S., and Joshi V., (2016) “Application of Earth Observation Data and Standardized Precipitation Index based Approach for Meteorological Drought Monitoring, Assessment and Prediction over Kutch, Gujarat, India.”, International Journal of Environment and Geoinformatics, Volume 3(2), PP 24-37.

De Martonne, E. (1926), “Aerisme, et indices d'aridite. Comptesrendus de L'Academie des Sciences”, Volume 182, PP 1395–1398.

Disaster Management Act (<http://www.ndma.gov.in/en/disaster.html>) Issued by the National Disaster Management Authority (<http://www.ndma.gov.in/en/>), Doi: 10.59327/IPCC/Ar6-9789291691647.001.

Gaikwad S. V., and Kale K.V., (2015), “Agricultural Drought Assessment of Post Monsoon Season of Vaijapur Taluka Using Landsat 8”, International Journal of Research in Engineering and Technology, eissn: 2319-1163, pISSN: 2321-7308, PP 405-412.

Gibbs W.J., and Maher J.V. (1967), “Rainfall deciles as drought indicators”, Bureau of Meteorology Bulletin, No. 48. Commonwealth of Australia, Melbourne. <http://dx.doi.org/10.1080/01431169608948714>

Gujarat State Disaster Management Authority (<http://www.gsdma.org/>) and Other Government Websites ([https:// data.gov.in/](https://data.gov.in/)).

Haider S., and Adnan S., (2014), “Classification and Assessment of Aridity Over Pakistan Provinces (1960-2009)”, International Journal of Environment Volume 3(4), ISSN 2091-2854, PP 24-35.

Helali J, Asaadi S, Jafarie T, Habibi M, Salimi S, Seyed E. M., Shahmoradi S, Hosseini S., Hessari B., and Vahideh S., (2022), "Drought monitoring and its effects on vegetation and water extent changes using remote sensing data in Urmia Lake watershed Iran", *Journal of Water and Climate Change*, Volume 13(5), PP 2107–2128. <https://doi.org/10.2166/wcc.2022.460>.

<http://www.ndma.gov.in/images/guidelines/national-dmpolicy2009.pdf>

Indian Meteorological Department (1971), "Rainfall and Drought in India, Indian Meteorological Department", Government of India, Pune, India

Indian Meteorological Department, (<http://www.imd.gov.in>)

IPCC, 2023: Summary for Policymakers in: *Climate Change 2023: Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, IPCC, Geneva, Switzerland.

Iskander S. M., Rajib M. A. and Rahman, M. M., (2014), "Trending Regional Precipitation Distribution and Intensity: use of Climatic Indices", *Atmospheric and Climate Sciences*, Volume 4, PP 385-393.

Javed T., Li Y., Rashid S., Li F., Hu Q., Feng H., Chen X., Ahmad S., Liu F. and Pulatov B. (2021), "Performance and relationship of four different agricultural drought indices for drought monitoring in China's mainland using remote sensing data". *Science of the Total Environment*, Volume 759, 143530. <https://doi.org/10.1016/j.scitotenv.2020.143530>.

Jemai S., Ellouze M., Agoubi B., and Abida H., (2016), "Drought intensity and spatial variability In Gabes Watershed, South-eastern Tunisia", *Journal of Water and Land Development*, No. 31, PP 63–72.

Karinki R. K., and Sahoo S. N., (2021), "Use of meteorological data for identification of drought", *ISH Journal of Hydraulic Engineering*, Volume 27(4), PP 427-433, DOI: 10.1080/09715010.2018.1564075

Keka I. A., Matin I., Rahman M., and Banu D. A., (2012), "Analysis of Drought in Eastern Part of Bangladesh", *Daffodil International University Journal of Science and Technology*, Volume 7(1), PP 20-27.

Kogan F.N., (1995), "Application of vegetation index and brightness temperature for drought detection", *Advances in Space Research*, Volume 15(11), PP 91–100. doi: 10.1016/0273-1177(95)00079-T.

Kogan F.N., (2001), "Operational space technology for global vegetation assessments", *Bulletin of the American Meteorological Society*, Volume 82(9), PP 1949–1964.

Luong Bang, Fang Li, Trieu Anh, and Hiramatsu N., (2015), "Adaptive Neuro-Fuzzy Inference System for Drought Forecasting in the Cai River Basin in Vietnam", *Journal of the Faculty of Agriculture Kyushu University*, Volume 60(2), PP 405-415. doi: 10.5109/1543403.

Mahajan D. R, and Dodamani B.M., (2015), "Trend Analysis of Drought Events over Upper Krishna Basin in Maharashtra", *International Conference on Water Resources, Coastal and Ocean Engineering, Aquatic Procedia*, Volume 4, PP 1250 – 1257.

McKee T. B., Doesken N. J., and Kleist J. (1993), "The relationship of drought frequency and duration to time scales in 8th Conference on Applied Climatology, American Meteorology Society, Boston, PP 179–184.

Mishra A.K., and Desai V.R., (2016), "Drought forecasting using feed-forward recursive neural network", *Ecological Modelling*, Volume 198(1–2), PP 127-138, <https://doi.org/10.1016/j.ecolmodel.2006.04.017>.

Mishra S., and Nagarajan R., (2011), "Spatio-temporal drought assessment in Tel river basin using Standardized Precipitation Index (SPI) and GIS", *Geomatics, Natural Hazards and Risk Natural Hazards and Risk Journal*, Volume (1): PP 79-93.

Mistry P.B. and Suryanarayana T.M.V., (2019), "Categorization of Drought During Twentieth Century Using Precipitation in Banaskantha District, Gujarat, India", *Innovations in Infrastructure, Advances in Intelligent Systems and Computing*, 757, PP 267-274, [https://doi.org/10.1007/978-981-13-1966-2\\_23](https://doi.org/10.1007/978-981-13-1966-2_23)

National Disaster Management Guidelines (2016) – School Safety Policy - A Publication of the National Disaster Management Authority, Government of India. ISBN: 978-93-84792-01-5., Published By Government of India

Nithya D., and Suja R., (2014), "Assessing Agricultural Vulnerability using Geomatic Technology: A Case Study of Srivilliputhur Taluk of Virudhunagar District, Tamil Nadu", *International Journal of Advancement in Remote Sensing, GIS and Geography*, ISSN 2321–835, Volume 2(2), PP 11-17.

Nohegar A., Mahmoodabad S. and Norouzi A., (2015), "Comparison the Suitability of SPI, PNI and DI Drought Index in Kahurestan Watershed (Hormozgan Province/South of Iran)", *Journal of Environment and Earth Science*, ISSN 2224-3216(Paper), ISSN 2225-0948 (Online), PP 71:76.

Oliver J.E. (1980), "Monthly precipitation distribution: a comparative index", *The Professional Geographer*, Volume 32(3), PP 300-309.

Oyounalsoud S. M, Abdallah M., Gokhan A., Siddique M., and Atabay S., (2023), "A new meteorological drought index based on Fuzzy logic: Development and comparative assessment with conventional drought indices", *Journal of Hydrology*, 619.

Pandey S, Kumar M., and Mahanti N.C., (2014), "Assessment of Drought Severity in Various Regions of Jharkhand State of India", *International Research Journal of Environmental Sciences*, E-ISSN: 2319 – 141, Volume 3(2), PP 8-14.

Patel N. R., Suryanarayana T.M.V., and Shete D.T., (2017), "Analyzing Extreme Events using Standardized Precipitation Index during the 20th Century for Surat District, India"., *Application of Geographical Information Systems and Soft Computation*, Springer Nature Singapore Pte Ltd, PP 41-50.

Pius B., and Marszelewski W., (2014), "An Attempt to Assess the Influence of Dry and Wet Periods upon River Runoff: An Example of the Drwęca River (POLAND)", *2nd International Conference - Water resources and wetlands*, ISSN: 2285-7923; PP 285-292.

Qi J., Chehbouni A., Huete A.R., Kerr Y.H., and Sorooshian S. A, (1994), "modified soil adjusted vegetation index", *Remote Sensing Environment*, Volume 48, PP 119–126.

Rahman A., (2021), "Development of Fuzzy Membership Functions and Meteorological Drought Classification as per SPI", *Global Journal of Science Frontier Research: Mathematics and Decision Sciences*, ISSN: 2249-4626, Volume 21(3).

Rahmat S., Jayasuriya N., and Bhuiyan M., (2015), "Trend analysis of drought using Standardised Precipitation Index (SPI) in Victoria, Australia HWRS", ISBN 978-1-922107-62-6, *Engineers Australia*, PP 441-448.

Ray Lala I.P., Bora P.K., Ram V., Singh A.K., Singh R. and Feroze S.M., (2012), "Meteorological Drought Assessment in Barapani, Meghalaya", *Journal of Indian Water Resources Society*, Vol 32(1-2), PP 56-61.

Reddy S.J., and Reddy R.S. (1973), "A new method of estimation of water balance", In *International Symposium on Tropical Meteorology Meeting American Meteorological Society*, PP 277-280.

Renza D., Martinez E., Arquero A., and Sanchez J., (2010), "Drought Estimation Maps by Means of Multidate Landsat Fused Images", Remote Sensing For Science, Education, Natural and Cultural Heritage, PP 1-8.

Rizqi I. S, Bambang H. T, Shiddiqa D , Imana L. S., Kusdaryantoa S, Manijoa ,and Panujua D. R.,(2016), "Identification of agricultural drought extent based on vegetation health indices of Landsat data: case of Subang and Karawang, Indonesia", The 2<sup>nd</sup> International Symposium on LAPAN-IPB Satellite for Food Security and Environmental Monitoring, LISAT-FSEM, Procedia Environmental Sciences, Volume 33 , PP 14 – 20.

S.K. McFeeters, (1996), "The Use of the Normalized Difference Water Index (NDWI) in the Delineation of Open Water Features", International Journal of Remote Sensing, Volume 17, PP 1425-1432.

Sabău N.C., Domuța C., Man T.E., Maria Șandor, and Brejea R.,(2002), "Drought Analysis by the Climate Indexes in link with the yield of the main crop from the Crișurilor Plain, Romania", International Conference on Drought Mitigation and Prevention of Land Desertification, At: Bled, Slovenia, PP 1-7.

Sawa, B. A., Jaiyeoba O. F., and Oladipo I. A., (2015), "Trends in Aridity of the Arid and Semi-Arid Regions of Northern Nigeria", Journal of Environment and Earth Science, ISSN 2224-3216(Paper), ISSN 2225-0948 (Online), Volume 5(10).

Shamsnia S., and Boustani F., (2014), "Application of remote sensing indices in the Assessment of meteorological drought for Sustainable development", Journal of Civil Engineering and Environmental Technology, ISSN: 2349-8404 (Paper); ISSN: 2349-879X (Online), Volume 1(5), PP 96 – 101.

Shen L., and Li C. (2010), "Water body extraction from Landsat ETM+ imagery using adaboost algorithm". In Proceedings of the 18th International Conference on Geoinformatics, Beijing, China, PP 1–4.

Shewale M. P., and Kumar S., (2005), Climatological Features of Drought Incidences in India, Issued by National Climate Centre Office of the Additional Director General of Meteorology (Research), India Meteorological Department.

Soumyashri R., and Patil N. S., (2016), "Drought Analysis Based on Streamflow Drought Index (SDI) in Bhima sub-basin", International Journal of Advanced Engineering Research and Applications, ISSN: 2454-2377, Volume 2(3), PP 154-159.

Sruthi. S, and Mohammed M.A., (2015), "Agricultural Drought Analysis using the NDVI and Land Surface Temperature Data: A Case Study of Raichur District",

International Conference on Water Resources, Coastal and Ocean Engineering(ICWRCOE), Aquatic Procedia, Volume 4, PP 1258 – 1264.

Sultana S, Gazi M. Y., and Bodruddoza M., (2021), “Multiple indices based agricultural drought assessment in the northwestern part of Bangladesh using geospatial techniques”, Environmental Challenges, Volume 4, PP 1-16.

Tapas M.R., Kumar U., Mogili S., and Jayakumar K. V., (2022), “Development of multivariate integrated drought monitoring index (MIDMI) for Warangal region of Telangana, India”, Journal of Water and Climate Change, Volume 13 (3), PP 1612–1630. <https://doi.org/10.2166/wcc.2021.065>.

Thornthwaite C. W. (1948), “An approach toward a rational classification of climate. Geography Revolution, Volume 38(1), PP 55–94.

Tigkas D., Vangelis H., and Tsakiris G., (2015), “The RDI as a composite climatic index”, European Water, Volume 41, PP 17-22.

Tsakiris G. (2004), “Meteorological drought assessment, paper prepared for the needs of the European Research Program MEDROPLAN”, Mediterranean Drought Preparedness and Mitigation Planning, Zaragoza.

Tsakiris G., and Vangelis H. (2005), “Establishing a drought index incorporating evapotranspiration”. European Water Journal, Volume 9(10), PP 3–11.

Tsakiris G., Nalbantis I., Pangalou D., Tigkas D., and Vangelis H. (2008), “Drought meteorological monitoring network design for the Reconnaissance Drought Index (RDI)”, 1st international conference “drought management: scientific and technological innovations”. Zaragoza-Spain.

UNESCO (1979), “Map of the world distribution of arid regions: Explanatory note”, MAP Technical Notes, UNESCO, Paris, 7, 54.

Van Rooy, (1965), “A rainfall anomaly index (RAI) independent of time and space”. Notos, Volume 14, PP 43–48.

Vicente-Serrano S. M., Begueria S. and López-Moreno J. I. (2010), “A multi-scalar drought index sensitive to global warming: the standardized precipitation evapotranspiration index”. Journal of Climate, Volume 23, PP 1696–1718.

Willeke G., Hosking J. R., Wallis J. R. and Guttman N. B. (1994), “The National Drought Atlas Institute for Water Resources Report 94-NDS-4, US. Army Corps of Engineers, Alexandria, VA, USA, PP 582–587.

Wu H, Hayes M. J., Weiss A., and Hu Q., (2001), "An evaluation of the Standardized Precipitation Index, the China-Z Index and the statistical Z-Score". *International Journal of Climatology*, Volume 21(6), PP 745–758.

Wu H., Hayes M.J., Weiss A. and Hu Q., (2001), "An evaluation of the Standardized Precipitation Index, the China-Z Index and the Statistical Z-score", *International Journal of Climatology*, Volume 21, PP 745–758.

Xu H. (2006), "Modification of normalised difference water index (NDWI) to enhance open water features in remotely sensed imagery", *International Journal Remote Sensing*, Volume 27, PP 3025–3033.

Zarch M., Malekinezhad H., Mohammad H., Mohammad T., and Mohammad R., (2011), "Drought Monitoring by Reconnaissance Drought Index (RDI) in Iran", *Water Resources Management*, Volume 25, PP 3485–3504.