

## *References*

## REFERENCES

- Abdulraheem, M.I., Zhang, W., Li, S., Moshayedi, A.J., Farooque, A.A., and Hu, J. 2023. Advancement of remote sensing for soil measurements and applications: A comprehensive review. *Sustain.* 15(21) p.15444.
- Ahmed, S.A., Chandrashekarappa, K.N., Raj, S.K., Nischitha, V., and Kavitha, G. 2010. Evaluation of morphometric parameters derived from ASTER and SRTM DEM—a study on Bandihole sub-watershed basin in Karnataka. *J. Indian Soc. Remote Sens.* 38(2): 227-238.
- Akhtar, S. and Hasnat, M., 2023. Spatiotemporal & geostatistical modelling of groundwater level depth over Haryana-Punjab, India. *J. Geogr. Environ. Earth Sci. Int.* 27(11) : 95-118.
- Alshari, E.A. and Gawali, B.W. 2021. Development of classification system for LULC using remote sensing and GIS. *Glob. Transit. Proc.* 2: 8–17.
- Aziz, N.A., Abdulrazzaq, Z., and Mansur, M.N. 2020. GIS-based watershed morphometric analysis using DEM data in Diyala River, Iraq. *Iraqi Geol. J.* 53: 36-49.
- Bera, A., Mukhopadhyay, B.P., and Das, D. 2018. Morphometric analysis of Adula River Basin in Maharashtra, India using GIS and remote sensing techniques. *Geosp. Data Nat. Resour.* 13–35.
- Bhatt, S. and Ahmed, S. A. 2014. Morphometric analysis to determine floods in the Upper Krishna basin using Cartosat DEM. *Geocarto Int.* 29(8): 878–894.
- Chorley, R.J. 1957. A new standard for estimating drainage basin shape. *Amer. J. Sci.* 255, pp.138-141.
- Choudhari, P.P., Nigam, G.K., Singh, S.K., and Thakur, S. 2018. Morphometric based prioritization of watershed for groundwater potential of Mula river basin, Maharashtra, India. *Geol. Ecol. Landsc.* 2: 256–267.

- Choudhary, A.K. and Singh, V. 2024. Investigating the changing pattern of groundwater levels and rainfall in the peninsular region of Bhagalpur and Khagaria, Bihar. *Water Supply*, 24(2): 465-479.
- Dhaloiya, A. and Singh, J.P. 2024. Spatio-temporal patterns of groundwater level changes in southwestern Indian Punjab. *Water Supply*, 24(2): 497-516.
- DSSSC [Department of Soil Survey and Soil Conservation]. 2024. Olanthichira Watershed Completion Report 2016-2022. Department of Soil Survey and Soil Conservation, Malappuram, 86 p.
- Fahad, K.H., Hussein, S., and Dibs, H. 2020. Spatial-temporal analysis of land use and land cover change detection using remote sensing and GIS techniques. In: IOP Conference Series: *Materials Science and Engineering*, 3rd International Conference on Engineering Sciences, 4–6 November 2019, Kerbala, Iraq. 671(1) p. 012046
- Faniran, A. 1968. The index of drainage intensity: a provisional new drainage factor. *Aust. J. Sci.* 31(9), pp.326-330.
- Ganasria, B.P. and Dwarakisha, G.S., 2015. Study of land use/land cover dynamics through classification algorithms for Harangi catchment area, Karnataka State, India. In: *Aquatic Procedia, International Conference on Water Resources, Coastal and Ocean Engineering*, 4, pp. 1413-1420.
- Gandhi, G.M., Parthiban, S., Thummalu, N., and Christy, A. 2015. NDVI: Vegetation change detection using remote sensing and GIS – A case study of Vellore District. In: *Proceedings of the 3rd International Conference on Recent Trends in Computing*, Chennai, India. Sathyabama University, pp. 1199-1210.
- Girma, R., Abraham, T., and Muluneh, A. 2020. Quantitative evaluation of watershed attributes for water resources management in the Rift Valley Lakes Basin, Ethiopia: a case from Tikur Wuha river watershed. *Appl. Water Sci.* 10(8): 1-15.

- GOI [Government of India]. 2011. *Common Guidelines for Watershed Development Projects—2008 (Revised 2011)*[on-line]. Available: [01 Nov 2024]
- GOI [Government of India]. 2023. *Agricultural Statistics at a Glance 2023* [on-line]. Available: [01 Nov 2024]
- Guchhait, S., Dolui, G., Das, S., and Das, N. 2023. Groundwater fluctuation and agricultural insecurity: A geospatial analysis of West Bengal in India. In *Case Studies in Geospatial Applications to Groundwater Resources*. Elsevier, pp. 275-288.
- Gull, S., Shah, S.R., and Dar, A.M. 2022. Assessing land use/land cover change detection of north-eastern watersheds of Kashmir valley using GIS and remote sensing techniques. *Water Pract. Technol.* 17(8): 1603-1614.
- Herold, M., Latham, J.S., Di Gregorio, A., and Schmullius, C.C. 2006. Evolving standards in land cover characterization. *J. Land Use Sci.* 1(3): 157–168
- Horton, R.E. 1932. Drainage-basin characteristics. *Trans. Am. Geophys. Union*, 13(1), pp.350-361.
- Horton, R.E. 1945. Erosional development of streams and their drainage basins; hydrophysical approach to quantitative morphology. *Geol. Soc. America bulletin*, 56(3), pp. 275-370.
- Jackson, R.D. and Huete, A.R. 1991. Interpreting vegetation indices. *Preventive Vet. Med.* 11(3-4): 185-200.
- Jaiswal, R.K., Saxena, R., and Mukherjee, S. 1999. Application of remote sensing technology for land use/land cover change analysis. *J. Indian Soc. Remote Sens.* 27: 123-128.
- Jayakumar, S. and Arockiasamy, D I. 2003. Land Use/Land Cover Mapping and Change Detection in part of Eastern Ghats of Tamil Nadu using Remote Sensing and GIS. *J. Indian Soc. Remote Sens.* 31: 70-78.

- Kerr, J.M., George, P.S., Pangare, G., and Pangare, V. 2000. An evaluation of dryland watershed development projects in India, EPTD Discussion Paper No.68, International Food Policy Research Institute, Washington, DC
- Kinattinkara, S., Arumugam, T., Kuppusamy, S., and Krishnan, M. 2022. Land use/land cover changes of Noyyal watershed in Coimbatore district, India, mapped using remote sensing techniques. *Environ. Sci. Pollut. Res.* 29(57): 86349-86361.
- Knudby, A. (2024) Classification. Available at: <https://ecampusontario.pressbooks.pub/remotesensing/chapter/chapter-6-classification/> (Accessed: 15 Oct 2024).
- Kumar, P.S. 2022. GIS-based mapping of water-level fluctuations (WLF) and its impact on groundwater in an Agrarian District in Tamil Nadu, India. *Environ. Dev. Sustain.* 24(1): 994-1009.
- Kuntamalla, S., Nalla, M., and Saxena, P.R. 2018. Morphometric Analysis of Drainage Basin through GIS: A Case Study from South Western part of Rangareddy District, Telangana State, India. In *11th International Conference on Researches in Science, Technology and Managment* p.11.
- Lu, D., Mausel, P., Batistella, M., and Moran, E. 2004. Comparison of land-cover classification methods in the Brazilian Amazon Basin. *Photogrammetric Eng. Remote Sens.* 70(6): 723-731.
- Manandhar, R., Odeh, I.O., and Ancev, T., 2009. Improving the accuracy of land use and land cover classification of Landsat data using post-classification enhancement. *Remote Sens.* 1(3): 330-344.
- Mani, T.M., Prasad, S., George, R., and Jayabharathi, J. 2023. LULC dynamics and application of nature based solution in high erosion prone areas of Malappuram District. *Environ. Conserv. J.* 24(3): 222-233.

- Manikpuri, S. and Tripathi, M.P. 2024. Morphometric Analysis Using Remote Sensing and Geographical Information System: A Case Study of Nawagarh Watershed of Chhattisgarh, India. *Int. J. Environ. Clim. Chang.* 14 (4): 574-590.
- Melton, M. A. 1957 An Analysis of the Relations among Elements of Climate, Surface Properties, and Geomorphology. Columbia University, New York.
- Miller, V.C.1953. Quantitative geomorphic study of drainage basin characteristics in the Clinch Mountain area, Virginia and Tennessee. Technical report, Columbia University. Department of Geology, no. 3.
- Mishra, S.P., Nayak, J., Barik, K.K., and Sethi, K.C. 2023. The delineation of watersheds in the Dhenkanal District, Odisha, India; Using Arc-GIS. *J. Sci. Res. Rep.* 29(5):1-18.
- Naikoo, M.W., Rihan, M., and Ishtiaque, M. 2020. Analyses of land use land cover (LULC) change and built-up expansion in the suburb of a metropolitan city: Spatio-temporal analysis of Delhi NCR using landsat datasets. *J. Urban Manag.* 9(3): 347-359.
- Nalawade, P.M., Gadakh, B.L., and Kadam A. M. 2022. Vegetation Change Detection using Remote Sensing and GIS, 2001-2021–A Case Study of Nashik City, Maharashtra. *Eco. Env. Cons.* 28: 229-233
- NASA Earth Observatory. 2000. Measuring vegetation (NDVI & EVI) [on-line]. Available:[https://earthobservatory.nasa.gov/features/MeasuringVegetation/measuring\\_vegetation\\_2.php](https://earthobservatory.nasa.gov/features/MeasuringVegetation/measuring_vegetation_2.php) [25 Oct 2024]
- NASA Shuttle Radar Topography Mission (SRTM). 2013. Shuttle Radar Topography Mission (SRTM) Global. Distributed by OpenTopography. [on-line] Available: <https://doi.org/10.5069/G9445JDF>. [23 July 2024]
- Palanichamy, A. 2017. Application of GIS in the Investigation of Groundwater Level and Fluctuation in Tiruchirappalli District, Tamil Nadu. *Int. J. Geomat. Geosci.* 7(4): 343-351.

- Palanisami, K., Kumar, D.S., and Wani, S.P. 2009. A Manual on Impact Assessment of Watersheds. Global Theme on Agroecosystems Report No. 53. Manual. International Crops Research Institute for the Semi-Arid Tropics, Patancheru, Andhra Pradesh, India.
- Pareta, K. and Pareta, U. 2011. Quantitative morphometric analysis of a watershed of Yamuna basin using ASTER (DEM) data and GIS. *Int. J. Geomat. Geosci.* 2(1):248–269.
- Ping, S.W., Wong, C., Chan, P., Khairul, N., Maulud, A., Syed, A., Fadhli, S., Syed, A.R., Kemarau, R.A., Hassan, M.I., Amri, F., and Mohd, A. 2024. Optimizing Hydrological Research: Comparative Analysis of DEMs for Enhanced Catchment Area Delineation. *J. Kejuruteraan*, 36(5):1805-1812.
- Pointet, T. 2022. The United Nations world water development report 2022 on groundwater, a synthesis. *LHB*, 108(1): p.2090867.
- Pradyumna, A., Mishra, A., Utzinger, J., and Winkler, M.S. 2020. Perceived health impacts of watershed development projects in southern India: a qualitative study. *Int. J. Environ. Res. Public Health*, 17(10) p.3448.
- Putty, M.R.Y. 2007. Quantitative geomorphology of the upper Kaveri basin in Western Ghats, in Karnataka. *J. Inst. Eng.* 88: 44–49.
- Ragi, R. and V, M., 2023. Watershed delineation and morphometric analysis using GIS and remote sensing. In: *Proceedings of the International Conference on Newer Engineering Concepts and Technology*, 12 July 2023, Volume 399, E3S Web Conf., Article No. 02002, pp. 1-11.
- Raj, P.N. and Azeez, P. A. 2012. Morphometric analysis of a tropical medium river system: A case from Bharathapuzha River Southern India. *Open J. Mod. Hydrol.* 02: 91–98.
- Reddy, P. V. R. M., Shankar, M.G., Reddy, B.J., Naik, Y.S., Ramana, R.V., Rekha, D. V. S. R. L., Kumar, V. H.V., and Singarao, M. 2021. Watershed Programme Impact

Assessment Study on LULC and NDVI using Remote Sensing and GIS in Srikakulam District of Andhra Pradesh. *Int. J. Curr. Microbiol. App. Sci.* 10(03): 2112-2119.

Romshoo, S.A., Bhat, S.A., and Rashid, I. 2012. Geoinformatics for assessing the morphometric control on hydrological response at watershed scale in the Upper Indus Basin. *J. Earth Syst. Sci.* 121: 659-686.

Rwanga, S.S. and Ndambuki, J.M. 2017. Accuracy assessment of land use/land cover classification using remote sensing and GIS. *Int. J. Geosci.* 8(04): p.611.

Sajeena, S. and Kurien, E.K., 2017. Hydrogeological Characteristics and Groundwater Scenario of Kadalundi River Basin, Malappuram District, Kerala. *Trends Biosci.* 10: 2193-2200.

Schumm, S.A. 1956. Evolution of drainage systems and slopes in badlands at Perth Amboy, New Jersey. *Geol. Soc. Am. bulletin*, 67(5), pp.597-646.

Seto, K.C., Woodcock, C.E., Song, C., Huang, X., Lu, J., and Kaufmann, R.K. 2002. Monitoring land-use change in the Pearl River Delta using Landsat TM. *Int. J. Remote Sens.* 23(10):1985-2004.

Seyam, M.M.H., Haque, M.R., and Rahman, M.M. 2023. Identifying the land use land cover (LULC) changes using remote sensing and GIS approach: A case study at Bhaluka in Mymensingh, Bangladesh. *Case Studies Chem. Environ. Eng.* 7, p.100293.

Sha, K., Srinivasa, A., and Madhu, D. 2020. The study on variability of NDVI over Kerala using satellite observations. In *AIP Conference Proceedings*, Nov 2020, Volume. 2287, AIP Publishing.

Shanwad, U.K., Gowda, H.H., Prabhuraj, D.K., Reddy, K.A., and Lxmikanth, B.P. 2012. Impact assessment of watershed programme through remote sensing and geographical information system. *J. Indian Soc. Remote Sens.* 40: 619-628.



- Sharda, V.N., Dogra, P., and Dhyani, B.L. 2012. Indicators for assessing the impacts of watershed development programmes in different regions of India. *Indian J. Soil Conserv.* 40(1): 1-12.
- Sheeja, P.S., Singha, D.K., Sarangia, A., Sehgal, V., and Iquebalb, M.A. 2022. Change Detection of Groundwater Level and Quality in Coastal Aquifers of Malabar Region in Kerala, India. *Int. J. Environ. Clim. Chang.* 12: 755-768.
- Shekar, P.R. and Mathew, A. 2023. Morphometric analysis of watersheds: a comprehensive review of data sources, quality, and geospatial techniques. *Watershed Ecol. Environ.*
- Singh, M.C., Satpute, S., and Prasad, V. 2023. Remote sensing and GIS-based watershed prioritization for land and water conservation planning and management. *Water Sci. Technol.* 88(1): 233-265.
- Smith, K.G. 1950. Standards for grading texture of erosional topography. *Am. J. Sci.* 248(9), pp.655-668.
- Sohail, U., Khan, I.A., and Arsalan, M.H. 2020. Analysis the potential of vegetation indices (NDVI) for Land use/cover classification in Karachi by Landsat 8 data. *Int. J. Biol. Biotech.* 17 (2): 359-366
- Soni, S. 2017. Assessment of morphometric characteristics of Chakrar watershed in Madhya Pradesh India using geospatial technique. *Appl. Water Sci.* 7: 2089-2102.
- Sowmya, D.R., Shenoy, P.D., and Venugopal, K.R. 2020. Watershed delineation using SRTM DEM for Bangalore South Region. *Int. J. Eng. Sci. Invention*, 9(3): 01-09.
- Sreedevi, P.D., Sreekanth, P.D., Khan, H.H., and Ahmed, S. 2013. Drainage morphometry and its influence on hydrology in a semiarid region: using SRTM data and GIS. *Environ. Earth Sci.* 70, pp.839-848.

- Srinivas, V.K., BC, R.K., and Sathish, A. 2023. The study of morphological characteristics for best management practices over the Halayapura micro-watershed of Karnataka, India, using remote sensing and geospatial
- Strahler, A. N. 1952. Hypsometric (area-altitude) analysis of erosional topography. *Geol. Soc. Am. bulletin*, 63(11) pp. 1117-1142.
- Strahler, A. N. 1957. Quantitative analysis of watershed geomorphology. *Eos, Trans. Am. Geophys. Union*, 38(6) pp. 913-920.
- Strahler, A. N. 1964. Quantitative geomorphology of drainage basin and channel networks. Handbook of applied hydrology techniques. *Environ. Conserv. J.* 24(1) pp.71-81.
- Sujatha, E.R., Selvakumar, R., Rajasimman, U.A.B., and Victor, R.G. 2015 Morphometric analysis of sub-watershed in parts of Western Ghats, South India using ASTER DEM. *Geomat. Nat. Hazards Risk* 6(4): 326-341.
- Sukristiyanti, S., Maria, R., and Lestiana, H. 2018. Watershed-based morphometric analysis: a review. In *IOP conference series: earth and environmental science*, IOP Publishing, 118(1) p. 012028).
- Sumiya, N.N. and Khatun, H. 2016. Groundwater variability in Bangladesh: assessment based on rainfall variation and use of water in irrigation. *J. Asiat. Soc. Bangladesh Sci.* 42(2): 177-189.
- Thangavelu, A., Manoj, K., Sapna, K., Jyothin, C.K., and Prashanth, K.P. 2021. Investigation of land use cover patterns of sea shore vegetation of Kannur Coast of Northern Kerala, India using GIS. *Ecol. Environ. Conserv.* 27: 225-235.
- Thomas, J. and Prasannakumar, V. 2015. Comparison of basin morphometry derived from topographic maps, ASTER and SRTM DEMs: an example from Kerala, India. *Geocarto Int.* 30(3): 346-364.
- Umrikar, B.N. 2017. Morphometric analysis of Andhale watershed, taluka Mulshi, district Pune, India. *Appl. Water Sci.* 7: 2231-2243.

- Venkatesan, A. 2014. Geoinformatics in fluvial geomorphological study of thoppaiyar sub basin Tamil Nadu India. Ph.D thesis, Periyar University, Salem, 195p.
- Venkatesan, G., Subramani, T., Karunanidhi, D., Sathya, U., and Li, P. 2021. Impact of precipitation disparity on groundwater fluctuation in a semi-arid region (Vellore district) of southern India using geospatial techniques. *Environ. Sci. Pollut. Res.* 28: 18539-18551.
- Vilasan, R.T. and Kapse, V.S. 2022. Monitoring spatio-temporal dynamics of land use/land cover changes using remote sensing and GIS—a case study of Ernakulam district, India. *Applied Ecol. Environ. Res.* 20(4).
- Vincy, M.V., Rajan, B., and Kumar, A. P. P. 2012. Geographic information system–based morphometric characterization of sub-watersheds of Meenachil river basin, Kottayam district, Kerala, India. *Geocarto Int.* 27(8): 661-684.
- Wakode, H.B., Baier, K., Jha, R., and Azzam, R. 2018. Impact of urbanization on groundwater recharge and urban water balance for the city of Hyderabad, India. *Int. Soil Water Conserv. Res.* 6(1): 51-62.
- Wang, G., Mang, S., Cai, H., Liu, S., Zhang, Z., Wang, L., and Innes, J.L. 2016. Integrated watershed management: evolution, development and emerging trends. *J. For. Res.* 27: 967-994.
- Wani, S.P., Pathak, P., Tam, H.M., Ramakrishna, A., Singh, P., and Sreedevi, T.K. 2002. Integrated Watershed Management for Minimizing Land Degradation and Sustaining Productivity in Asia. In: Adeel, Z. (ed.), *Integrated Land Management in Dry Areas*. Proceedings of a Joint UNU-CAS International Workshop, 8-13 September 2001, Beijing, China, pp. 207-230.
- Wentzel, K. 2002. Determination of the overall soil erosion potential in the Nsikazi District (Mpumalanga Province, South Africa) using remote sensing and GIS. *Canadian J. Remote Sens.* 28(2): 322-327.