References

[1] K. A. U. S. Imbulana, N. T. S. Wijesekera, and B. R. Neupane, "Case study : Sri Lanka, Sri Lanka National Water Development Report," 2006. doi: UN-Water/WWAP/2006/11.

[2] Ministry of Disaster Management, "Sri Lanka Comprehensive Disaster Management Programme 2014 - 2018," 2014. [Online]. Available: http://www.disastermin.gov.lk/web/images/pdf/slcdmp english.pdf.

[3] World Meteorological Organization (WMO), "Flood Forecasting and Early Warning," 2013. doi: FLOOD FORECASTING & EARLY WARNING [V1.0] [130821] 3.

[4] Food and Agriculture Organization of the United Nations (FAO), "Country profile – Sri Lanka," 2011. doi: FAO. 2011. AQUASTAT Country Profile – Sri Lanka.

[5] D. M. Centre, "Annual Report 2017," 2019. [Online]. Available: www.dmc.gov.lk.

[6] International Federation of Red Cross and Red Cresent Societies, "Information bulletin Sri Lanka: Floods and landslides Red Cross and Red Crescent Societies," 2019. [Online]. Available: www.ifrc.org.

[7] P. Minister, "Report to UN- Asia Pacific Adaptation Network Early Warning Systems for Disasters in Sri Lanka," 2015. [Online]. Available: https://lankajalani.org/wp-content/uploads/2015/03/early-warning-systems-for-Sri-Lanka.pdf.

[8] M. Millangoda and S. Gunawardana, "Status of Operational Flash Flood Forecasting and Early Warning Capabilities Sri Lanka," no. June. presented at the South Asia Flash Flood Guidance System (SAsiaFFGS) Operational Training Follow-up Workshop – Step 4, New Delhi, India, p. 51, 2018.

[9] A. Liberati *et al.*, "The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: explanation and elaboration," *BMJ*, vol. 339, 2009, doi: 10.1136/bmj.b2700.

[10]   and T. G. T. Beth A. Covitt, Tania T. Hinojosa, Jose Marcos-Iga, Marcia S. Matz, Abraham Miller-Rushing, Anica Miller-Rushing, Ari J. Posner, *Environmental Literacy Teacher Guide Series, Earth ' s Freshwater*. National Geographic Education.

[11]   L. E. Johnson, *Geographic information systems in water resources engineering*. CRC Press, Taylor & Francis Group, 2009.

[12]   World Meteorological Organization, *Manual on flood forecasting and warning*, no. 1072. 2011.

[13]   K. Corbitt and S. Meyer, "Module 6: MANAGEMENT OF WATER RESOURCES," *Phs 608*, p. University of Waterloo, 2015, [Online]. Available: https://learn.uwaterloo.ca/d2l/le/content/228991/viewContent/1371499/View.

[14]   A. Dinar, S. Dinar, S. McCaffrey, and D. McKinney, "Bridges Over Water," vol. 3, Oct. 2007, doi: 10.1142/6184.

[15]   C. Chen *et al.*, "CRML: A Convolution Regression Model with Machine Learning for Hydrology Forecasting," *IEEE Access*, vol. 7, pp. 133839–133849, 2019, doi: 10.1109/ACCESS.2019.2941234.

[16]   X. Cheng, Z. K. Feng, and W. J. Niu, "Forecasting Monthly Runoff Time Series by Single-Layer Feedforward Artificial Neural Network and Grey Wolf Optimizer," *IEEE Access*, vol. 8, pp. 157346–157355, 2020, doi: 10.1109/ACCESS.2020.3019574.

[17]   Z. LV, J. Zuo, and D. Rodriguez, "Predicting of Runoff Using an Optimized SWAT-ANN: A Case Study," *J. Hydrol. Reg. Stud.*, vol. 29, no. March, 2020, doi: 10.1016/j.ejrh.2020.100688.

[18]   J. Feng, L. Yan, and T. Hang, "Stream-flow forecasting based on dynamic spatio-temporal attention," *IEEE Access*, vol. 7, pp. 134754–134762, 2019, doi: 10.1109/ACCESS.2019.2941799.

[19]   U. K. Panchal, H. Ajmani, and S. Y. Sait, "Flooding Level Classification by Gait Analysis of Smartphone Sensor Data," *IEEE Access*, vol. 7, pp. 181678–181687, 2019, doi: 10.1109/ACCESS.2019.2959557.

[20]   I. Curebal, R. Efe, H. Ozdemir, and A. Soykan, "GIS-based approach for flood analysis : case study of Keçidere flash flood event (Turkey)," *Geocarto Int.*,

vol. 31, no. 4, pp. 355–366, 2015, doi: 10.1080/10106049.2015.1047411.

[21]   S. Khatami and B. Khazaei, "Benefits of GIS Application in Hydrological Modeling: A Brief Summary," *J. Water Manag. Res. 7041–49. Lund 2014*, pp. 41–49, 2014, [Online]. Available: http://lup.lub.lu.se/record/4091541.

[22]   J. B. Swain, R. Jha, and K. C. Patra, "Stream Flow Prediction in a Typical Ungauged Catchment Using GIUH Approach," in *Aquatic Procedia*, 2015, vol. 4, no. Icwrcoe, pp. 993–1000, doi: 10.1016/j.aqpro.2015.02.125.

[23]   M. H. Jahangir, S. M. Mousavi Reineh, and M. Abolghasemi, "Spatial predication of flood zonation mapping in Kan River Basin, Iran, using artificial neural network algorithm," *Weather Clim. Extrem.*, vol. 25, no. July, p. 100215, 2019, doi: 10.1016/j.wace.2019.100215.

[24]   T. M. Modrick and K. P. Georgakakos, "The character and causes of flash flood occurrence changes in mountainous small basins of Southern California under projected climatic change," *J. Hydrol. Reg. Stud.*, vol. 3, pp. 312–336, 2015, doi: 10.1016/j.ejrh.2015.02.003.

[25]   C. Yang, *Introduction to GIS programming and fundamentals with python and ArcGIS*. CRC Press Taylor & Francis Group, 2017.

[26]   W. Bajjali, *ArcGIS for Environmental and Water Issues*. Springer Textbooks in Earth Sciences, Geography and Environment, 2018.

[27]   L. Tateosian, *Python For ArcGIS*, vol. 2, no. 4. Springer Cham Heidelberg New York Dordrecht London, 2015.

[28]   J. Yaist and T. J. Duerr, "ArcGIS Pro: Scripting with Python," *ESRI Dev. Summit 2016*, 2016, [Online]. Available: http://proceedings.esri.com/library/userconf/devsummit16/index.html.

[29]   A. Warnasooriya, "Meteorological Component Sri Lanka," 2016.

[30]   P. Hettiarachchi, "Hydrological Component, Sri Lanka."

[31]   M. Millangoda, *Case Study of floods in 2018*, no. May. 2018, p. 36.

[32]   P.G.Somaratne, J. K, L. R. Perera, B. R. Ariyaratne, D. J. Bandaragoda, and I. W. Makin, "Developing effective Institutions for water Resources Management: A Case study in the Deduru Oya Basin, Sri Lanka. Working

Paper 58," 2003. [Online]. Available:
http://www.iwmi.cgiar.org/publications/iwmi-working-papers/iwmi-working-paper-58/.

[33] "Spatial analysis in ArcGIS Pro—ArcGIS Pro | Documentation."
https://pro.arcgis.com/en/pro-app/latest/help/analysis/introduction/spatial-analysis-in-arcgis-pro.htm (accessed Jul. 28, 2021).

[34] "What is geoprocessing?—ArcGIS Pro | Documentation."
https://pro.arcgis.com/en/pro-app/latest/help/analysis/geoprocessing/basics/what-is-geoprocessing-.htm (accessed Jul. 28, 2021).

[35] "Create a model tool—ArcGIS Pro | Documentation."
https://pro.arcgis.com/en/pro-app/latest/help/analysis/geoprocessing/modelbuilder/create-a-model-tool.htm (accessed Jul. 28, 2021).

[36] "Understanding drainage systems—ArcGIS Pro | Documentation."
https://pro.arcgis.com/en/pro-app/2.7/tool-reference/spatial-analyst/understanding-drainage-systems.htm (accessed Jul. 28, 2021).

[37] "Exploring digital elevation models—ArcGIS Pro | Documentation."
https://pro.arcgis.com/en/pro-app/2.7/tool-reference/spatial-analyst/exploring-digital-elevation-models.htm (accessed Jul. 28, 2021).

[38] "Map Catalog: DEM (Digital Elevation Model)."
http://slrmapcatalog.blogspot.com/2012/07/dem-digital-elevation-model.html (accessed Jul. 28, 2021).

[39] "Download data by country | DIVA-GIS." http://diva-gis.org/gdata (accessed Jul. 29, 2021).

[40] "Deriving runoff characteristics—ArcGIS Pro | Documentation."
https://pro.arcgis.com/en/pro-app/2.7/tool-reference/spatial-analyst/deriving-runoff-characteristics.htm (accessed Jul. 28, 2021).

[41] "Predict floods with unit hydrographs | Learn ArcGIS."
https://learn.arcgis.com/en/projects/predict-floods-with-unit-hydrographs/ (accessed Jul. 29, 2021).

[42] D. Djokic, "Arc Hydro in ArcGIS Pro : The Next Generation of Tools for Water Resources." esri, p. 48, 2020.

[43] "Flow Accumulation function—ArcGIS Pro | Documentation." https://pro.arcgis.com/en/pro-app/2.7/help/analysis/raster-functions/flow-accumulation-raster-function.htm (accessed Jul. 30, 2021).

[44] D. R. Maidment, F. Olivera, A. Calver, A. Eatherall, and W. Fraczek, "Unit Hydrograph Derived From a Spatially Distributed Velocity Field," *Hydrol. Process.*, vol. 10, no. 6, pp. 831–844, 1996, doi: https://doi.org/10.1002/(SICI)1099-1085(199606)10:6<831::AID-HYP374>3.0.CO;2-N.

[45] "Identifying stream networks—ArcGIS Pro | Documentation." https://pro.arcgis.com/en/pro-app/latest/tool-reference/spatial-analyst/identifying-stream-networks.htm (accessed Aug. 08, 2021).

[46] P. Hettiarachchi, "Inundation Maps of the Kelani River Flood in May 2016," 2017. [Online]. Available: https://www.irrigation.gov.lk/index.php?option=com_content&view=article&id=299&Itemid=206&lang=en.

[47] P. Hettiarachchi, "Inundation Maps of the Kalu Ganga Basin during the Flood in May 2003.," 2003. [Online]. Available: https://www.irrigation.gov.lk/index.php?option=com_content&view=article&id=299&Itemid=206&lang=en.

[48] Sri Lanka National Report, "Disaster Event & Impact Profile," 2009. [Online]. Available: http://www.desinventar.lk/des_html/disaster_profile/disaster_profile.pdf.

[49] "Reservoirs." https://www.irrigation.gov.lk/index.php?option=com_gmapfp&view=gmapfp&layout=categorie&catid=124&id_perso=0&Itemid=221&lang=en (accessed Jul. 26, 2021).

[50] "Reservoirs Status." https://crip.irrigation.gov.lk/portal/apps/opsdashboard/index.html#/6e201b03ab9d471d81ca613b12daa5cf (accessed Jul. 26, 2021).

[51] R. Chandrajith, K. Mahatantila, H. A. H. Jayasena, and H. J. Tobschall, "Geochemical characteristics of sediments from a reservoir (tank) ecosystem in Sri Lanka," *Paddy Water Environ.*, vol. 6, no. 4, pp. 363–371, 2008, doi: 10.1007/s10333-008-0133-y.