

- Belle, G.N., Fossey, A. and Esterhuizen, L. (2018). Use of multiple indicators to assess the pollution condition of urban streams: a case study of Bloemspruit, Free State Province, South Africa, *Water and Environment Journal*, 34(5): 1–13. DOI: 10.1111/wej.12444
- Boah, D.K., Twum, S.B. and Pelig-Ba, K.B. (2015). Mathematical Computation of Water Quality Index of Veve Dam in Upper East Region of Ghana, *Environmental Sciences*, 3(1): 11–16. DOI: 10.12988/ES.2015.4116
- Brack, W., Dulio, V., Ågerstrand, M., Allan, I., Altenburger, R., Brinkmann, M., Bunke, D., Burgess, R.M., Cousins, I., Escher, B.I., Hernández, F.J., Hewitt, M., Hilscherová, K., Hollender, J., Hollert, H., Kase, R., Klauer, B., Lindim, C., Herráez, D.L., ... Vrana, B. (2017). Towards the review of the European Union Water Framework Directive: Recommendations for more efficient assessment and management of chemical contamination in European surface water resources, *Science of the Total Environment*, 576: 720–737. DOI: 10.1016/j.scitotenv.2016.10.104
- Braune, E. and Xu, Y. (2008). Groundwater management issues in Southern Africa – an IWRM perspective, *Water SA*, 34(6): 699–706. DOI: 10.4314/wsa.v34i6.183672
- Brown, R.M., McClelland, N.I., Deininger, R.A. and O'Connor, M.F. (1972). 'A Water Quality Index – Crashing the Psychological Barrier'. In: Jenkins, S.H. (Eds). *Advances in Water Pollution Research: Proceedings of the Sixth International Conference on Water Pollution Research, Jerusalem, 18–24 June, 1972*. 787–797.
- Brown, R.M., McClelland, N.I., Deininger, R.A. and Tozer, R.G. (1970). A Water Quality Index: Do we dare?, *Water Sewage Works*, 117(10): 339–343.
- Caliman, F.A. and Gavrilescu, M. (2009). Pharmaceuticals, Personal Care Products and Endocrine Disrupting Agents in the Environment – A Review, *Clean – Soil Air Water*, 37(4–5): 277–303. DOI: 10.1002/clen.200900038
- Canadian Council of Ministers of the Environment (CCME) (2001) Canadian water quality guidelines for the protection of aquatic life: CCME Water Quality Index 1.0, User's Manual. In: *Canadian Environmental Quality Guidelines, 1999*. Winnipeg, Canada: Canadian Council of Ministers of the Environment. Available from: <[http://www.ccme.ca/files/Resources/calculators/WQI%20User's%20Manual%20\(en\).pdf](http://www.ccme.ca/files/Resources/calculators/WQI%20User's%20Manual%20(en).pdf)> [Accessed on: 25 June 2018]
- Canadian Council of Ministers of the Environment (CCME) (2017). *Canadian water quality guidelines for the protection of aquatic life: CCME Water Quality Index, User's Manual 2017 Update*. Winnipeg, Canada: Canadian Council of Ministers of the Environment. Available from: <<https://ccme.ca/en/res/wqimanualen.pdf>>

- Canadian Council of Ministers of the Environment (CCME) (2018). *Canadian Environmental Quality Guidelines (CEQGs): Water – Aquatic Life*. Winnipeg, Canada: Canadian Council of Ministers of the Environment. Available from: <<https://ccme.ca/en/resources/water-aquatic-life>>
- Chen, H., Zhang, P., Zhang, L., Liu, H., Jiang, Y., Zhang, D., Han, Z. and Jiang, L. (2016). Continuous directional water transport on the peristome surface of *Nepenthes alata*, *Nature*, 532(7597): 85–89. DOI: 10.1038/nature17189
- Chidya, R.C.G., Sajidu, S.M.I., Mwatseteza, J.F. and Masamba, W.R.L. (2011). Evaluation and assessment of water quality in Likangala River and its catchment area, *Physics and Chemistry of the Earth, Parts A/B/C*, 36(14–15): 865–871. DOI: 10.1016/j.pce.2011.07.070
- Chutter, F.M. (1994). 'The rapid biological assessment of stream and river water quality by means of the macroinvertebrate community in South Africa'. In: Uys, M.C. (Eds). *Classification of rivers and environmental health indicators: proceedings of a joint South African/Australian workshop, February 7–14 1994, Cape Town, South Africa*. Water Research Commission Report No TT 63/94.
- Chutter, F.M. (1998). Research on the rapid biological assessment of water quality impacts in streams and rivers, *Water Research Commission, Report No. 422/1/98*. Pretoria: Water Research Commission. Available from: <<http://www.wrc.org.za/wp-content/uploads/mdocs/422-1-98.pdf>>
- City of Phoenix (2017). *2017 Water Quality Report*. Phoenix: City of Phoenix Water Services Department. Available from: <https://www.phoenix.gov/waterservicessite/Documents/wsdprimarywqr_2017.pdf>
- Clarke, D., Salehin, M., Jahiruddin, M., Saleh, A., Rahman, Z., Rahman, M., Parks, K., Haque, M.A., Lázár, A.N. and Payo, A. (2015). *Salinity impacts on agriculture and groundwater in delta regions*. San Francisco, USA: American Geophysical Union, Fall Meeting 2015, Abstract id. GC41F-1142. Available from: <https://www.researchgate.net/publication/288392365_Salinity_impacts_on_agriculture_and_groundwater_in_delta_regions>
- CRAIC Technologies (2018). *What is a Spectrophotometer?* [Online] Available from: <<https://www.microspectra.com/support/learn/what-is-a-spectrophotometer>>
- Cude, C.G. (2001). Oregon Water Quality Index: A Tool for Evaluating Water Quality Management Effectiveness, *Journal of the American Water Resources Association*, 37(1): 125–137. DOI: 10.1111/j.1752-1688.2001.tb05480.x

- Dafter, H., Kachingwe, R., Safuya, K., Chinoko, G. and Mgomezulu, J. (2019). *Effects of Agricultural Activities on Water Quality in Rural Area Rivers*. Limbe, Malawi: Department of Water Resources. 1–6. DOI: 10.13140/RG.2.2.19450.44487
- Dallas, H.F. (2000). Ecological Reference Condition Project: Field-Manual. Volume 1: General information, catchment condition, invertebrates and water chemistry. *National Aquatic Ecosystem Biomonitoring Programme Report Series No. 10*, Pretoria, South Africa: Institute for Water Quality Studies, Department of Water Affairs and Forestry. Available from: <https://www.researchgate.net/publication/242496084_VOLUME_1_GENERAL_INFORMATION_CATCHMENT_CONDITION_INVERTEBRATES_AND_WATER_CHEMISTRY>
- Dallas, H.F. (2005). River Health Programme: Site characterisation field-manual and field-data sheets. *Report for Resource Quality Services*. Pretoria, South Africa: Department Water Affairs and Forestry. Available from: <<https://www.dws.gov.za/iwqs/rhp/reports/reportseries18.pdf>>
- Dallas, H.F. (2007). *River Health Programme: South African Scoring System (SASS) Data Interpretation Guidelines*. Pretoria, South Africa: Institute of Natural Resources and Department of Water Affairs and Forestry. 1–85. Available from: <<http://www.dwa.gov.za/iwqs/rhp/methods/SASSInterpretationGuidelines>>
- Dallas, H.F. and Day, J.A. (2007). Natural variation in macroinvertebrate assemblages and the development of a biological banding system for interpreting bioassessment data – a preliminary evaluation using data from upland sites in the south-western Cape, South Africa, *Hydrobiologia*, 575(1): 231–244. DOI: 10.1007/s10750-006-0374-y
- Daughton, C.G. and Ruhoy, L.S. (2009). Environmental footprint of pharmaceuticals: the significance of factors beyond direct excretion to sewers, *Environmental Toxicology and Chemistry*, 28(12): 2495–2521. DOI: 10.1897/08-382.1
- Department of Environmental Affairs and Tourism (DEAT) (2006). *State of Environmental Systems: Environmental Sustainability Indicator Report*. Pretoria, South Africa: Department of Environmental Affairs and Tourism. Available from: <https://www.dffe.gov.za/sites/default/files/docs/envirosustainability_indicators_systems_state.pdf>
- Department of Forestry, Fisheries and the Environment (DFFE) (2011). *World Cup Legacy Report, Chapter 6: Water*. Pretoria, South Africa: Department of Forestry, Fisheries and the Environment: 58–73. Available from: <<https://www.dffe.gov.za/sites/default/files/docs/water.pdf>>
- Department of Water Affairs (DWA) (2009). *Blue Drop Report 2009 and Green Drop Report 2009*. Pretoria, South Africa: Department of Water Affairs. Available from: <<http://www.dwa.gov.za/Documents/RSP.aspx>>

Department of Water Affairs (DWA)(2010).*The Groundwater Strategy, 2010*.Pretoria, South Africa: Department of Water Affairs. Available from: <<http://www.dwa.gov.za/Groundwater/gs.aspx>> [Accessed on: 17/05/2019]

Department of Water Affairs (DWA) (2012).*The Annual National State of Water Resources Report October 2011 to September 2012*. Pretoria, South Africa: Water Resource Information Management, Department of Water Affairs. Available from: <<https://www.dws.gov.za/Groundwater/documents/2011-12%20Annual%20National%20State%20of%20Water%20Resources%20report.pdf>>

Department of Water Affairs and Forestry (DWAf) (1996a).*South African Water Quality Guidelines, Volume 1: Domestic Use, 2nd Edition*. Pretoria, South Africa: Department of Water Affairs and Forestry. Available from: <https://www.dws.gov.za/Groundwater/documents/Pol_saWQguideFRESHDomesticusevol1.pdf>

Department of Water Affairs and Forestry (DWAf) (1996b).*South African Water Quality Guidelines, Volume 2: Recreational Use, 2nd Edition*. Pretoria, South Africa: Department of Water Affairs and Forestry. Available from: <https://www.dws.gov.za/Documents/Other/RMP/RWUM/RWU_GP6.pdf>

Department of Water Affairs and Forestry (DWAf) (1996c).*South African Water Quality Guidelines, Volume 3: Industrial Use, 2nd Edition*. Pretoria, South Africa: Department of Water Affairs and Forestry. Available from: <http://www.dwa.gov.za/iwqs/wq_guide/Pol_saWQguideMARINEIndustrialusevol3.pdf>

Department of Water Affairs and Forestry (DWAf) (1996d).*South African Water Quality Guidelines, Volume 4: Agricultural Use: Irrigation. 2nd Edition*. Pretoria, South Africa: Department of Water Affairs and Forestry. Available from: <https://www.dws.gov.za/iwqs/wq_guide/edited/Pol_saWQguideFRESHIrrigationvol4.pdf>

Department of Water Affairs and Forestry (DWAf) (1996e).*South African Water Quality Guidelines, Volume 7: Aquatic Ecosystems, 2nd Edition*. Pretoria, South Africa: Department of Water Affairs and Forestry. Available from:<http://www.dwa.gov.za/iwqs/wq_guide/Pol_saWQguideFRESHAquaticecosystemsvol7.pdf> [Accessed 20 May 2018]

Department of Water Affairs and Forestry (DWAf) (2002). *Managing the water quality effects of settlements: an interactive guide to implementation*. Pretoria, South Africa: Department of Water Affairs and Forestry.

Department of Water Affairs and Forestry (DWAf) (2009). *Development of an Integrated Water Quality Management Plan for the Vaal River System: Task 8: Water Quality Management Strategy for the Vaal River System. Report No. P RSA C000/00/2305/7*. Pretoria, South Africa: Department of

Water Affairs and Forestry. Available from:
<<https://www.dws.gov.za/iwvp/Vaal/documents/VaallWQMPTask8WQMStrategyReportFinalSept2009.pdf>>

Department of Water and Sanitation (DWS)(2015). *Water Quality Management Policies and Strategies for South Africa, Edition 1*. Pretoria, South Africa: Department of Water Affairs: 1–105. Available from: <https://www.dws.gov.za/iwvp/iwqms/Documents/Report%201.1_Inception%20Report.pdf>

Department of Water and Sanitation (DWS)(2016). *National Groundwater Strategy (NGS) – 2016*. Pretoria, South Africa: Department of Water and Sanitation. Available from: <<https://www.dws.gov.za/Groundwater/NGS2016.aspx>>

Department of Water and Sanitation (DWS)(2017). *Blue Drop Green Drop Report: Department of Water and Sanitation briefing*. Cape Town, South Africa: National Assembly. Available from: <<https://pmg.org.za/committee-meeting/23873/>>

Department of Water and Sanitation (DWS)(2019a). *Overview of Sustainable Development Goal 6*. Pretoria, South Africa: Department of Water and Sanitation. Available from: <<https://www.dws.gov.za/Projects/sdg/SDG6.aspx>>

Department of Water and Sanitation (DWS)(2019b). *Water and Sanitation investigates Duzi River water pollution: Media Statement*. Pretoria, South Africa: Department of Water and Sanitation. Available from: <<https://www.gov.za/speeches/duzi-river-water-pollution-18-aug-2019-0000>>

Dickens, C.W.S. and Graham, P.M.(2002). The South African Scoring System (SASS) Version 5 Rapid Bio assessment Method for Rivers, *African Journal of Aquatic Science*, 27(1):1–10. DOI: 10.2989/16085914.2002.9626569

Donnenfeld, Z., Crookes, C. and Hedden, S.(2018). A delicate balance: water scarcity in South Africa, *Institute for Security Studies, Southern Africa*, Report 13: 1–24. Available from: <<https://issafrica.s3.amazonaws.com/site/uploads/sar13-2.pdf>>

Ebele, A.J., Abdallah, M.A. and Harrad, S.(2017). Pharmaceuticals and personal care products (PPCPs) in the freshwater aquatic environment, *Emerging Contaminants*, 3(1): 1–16. DOI: 10.1016/j.emcon.2016.12.004

Edokpayi, J.N., Odiyo, J.O. and Durowoju, O.S.(2017). 'Impact of Wastewater on Surface Water Quality in Developing Countries: A Case Study of South Africa'. In: Tutu, H. (Eds). *Water Quality*. Rijeka, Croatia: InTech. 401–416. DOI: 10.5772/66561

- Environmental Protection Agency (EPA) (2001). *Parameters of Water Quality: Interpretation and Standards*. Dublin, Ireland: Environmental Protection Agency. Available from: <https://www.epa.ie/pubs/advice/water/quality/Water_Quality.pdf> [Accessed on: 13 May 2018]
- Environmental Working Group (EWG) (2009). Testing for pharmaceuticals and personal care products in the New York City drinking water supply. Washington, USA: Environmental Working Group. Available from: <<https://www.ewg.org/news-insights/testimony/testing-pharmaceuticals-and-personal-care-products-new-york-city-drinking>>
- Esterhuizen, L. 2014. *Drinking water quality and farming practices on dairy farms in the greater Mangaung Metro, South Africa*. Doctorate of Environmental Health, Central University of Technology, Bloemfontein. Available from: <<http://ir.cut.ac.za/handle/11462/1157>>
- Esterhuizen, L., Fossey, A. and Lues, J.F.L.(2012). Dairy farm borehole water quality in the greater Mangaung region of the Free State Province, South Africa, *Water SA*, 38(5): 803–806. Available from: <http://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S1816-79502012000500020&lng=en&nrm=iso>
- Etim, E.E., Odoh, R., Itodo, A.U., Umoh, S.D. and Lawal, U.(2013). Water Quality Index for the Assessment of Water Quality from Different Sources in the Niger Delta Region of Nigeria, *Frontiers in Science*, 3(3): 89–95. DOI: 10.5923/j.fs.20130303.02
- European Union (EU) (2013). *Directive 2013/39/EU of the European Parliament and the Council of 12 August 2013 amending Directives 2000/60/EC and 2008/105/EC as regards priority substances in the field of water policy (Text with EEA relevance)*. Brussels, Belgium: Official Journal of the European Union. Available from: <<https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:226:0001:0017:EN:PDF>>
- European Union (EU) (2018). *Proposal for a Directive of the European Parliament and of the Council on the quality of water intended for human consumption (recast) 2017/0332 (COD)*. Brussels, Belgium: Official Journal of the European Union. Available from: <https://ec.europa.eu/environment/water/water-drink/pdf/revised_drinking_water_directive.pdf>
- EzbakheF.(2018). Addressing Water Pollution:a Means to Achieving the Sustainable Development Goals, *Journal of Water Pollution and Control*, 1(1:6): 1–9. Available from: <https://www.researchgate.net/publication/330400361_Addressing_Water_pollution_as_a_Means_to_Achieving_the_Sustainable_Development_Goals/link/5c3e1dd6299bf12be3c9f90a/download>
- Fairbairn, D.J., Elliott, S.M., Kiesling, R.L., Schoenfuss, H.L., Ferrey, M.L. and Westerhoff, B.M.(2018). Contaminants of emerging concern in urban stormwater: Spatiotemporal patterns and removal by iron-enhanced sand filters (IESFs), *Water Research*, 145: 332–345. DOI: 10.1016/j.watres.2018.08.020

- Fawell, J. and Nieuwenhuijsen, M.J.(2003). Contaminants in drinking water:Environmental pollution and health, *British Medical Bulletin*, 68(1): 199–208. DOI: 10.1093/bmb/ldg027
- Fewtrell, L. and Bartram, J. (Eds) (2001). *Water Quality: Guidelines, Standards and Health: Assessment of risk and risk management for water-related infectious disease*. Geneva, Switzerland: World Health Organization. DOI: 10.2166/9781780405889
- Food and Agriculture Organization of the United Nations (FAO) (2017). *Water pollution from agriculture: a global review. Executive Summary*. Rome, Italy: Food and Agriculture Organization of the United Nations and International Water Management Institute: 1–27. Available from: <<https://www.fao.org/3/i7754e/i7754e.pdf>>
- Fourie, S.(2005). *An Assessment of Water Quality and Endocrine Disruption Activities in the Eerste/Kuils River Catchment System, Western Cape, South Africa*. Master of Science, University of Stellenbosch, Stellenbosch. Available from: <<https://scholar.sun.ac.za/handle/10019.1/20917>>
- Galadima, A., Garba, Z.N., Leke, L., Almustapha, M.N. and Adam, I.K.(2011). Domestic Water Pollution among Local Communities in Nigeria—Causes and Consequences, *European Journal of Scientific Research*, 52(4): 592–603. Available from: <https://nairametrics.com/wp-content/uploads/2013/03/2012-08-30-124334_5321.pdf>
- Gašo-Sokač, D., Habuda-Stanić, M., Bušić, V. and Zobundžija, D.(2017). Occurrence of pharmaceuticals in surface water, *Croatian Journal of Food Science and Technology*, 9(2): 204–210. DOI: 10.17508/CJFST.2017.9.2.18
- Gerber, A. and Gabriel, M.J.M. (2002a). *Aquatic Invertebrates of South African Rivers: Field Guide*. Pretoria, South Africa: Government Printer. Available from: <<https://www.dws.gov.za/iwqs/biomon/aquabugsa/aquabugfield.aspx>>
- Gerber, A. and Gabriel, M.J.M. (2002b). *Aquatic Invertebrates of South African Rivers: Illustrations*. Pretoria, South Africa: Department of Water Affairs. Available from: <http://wis.orasecom.org/content/study/RSA/General/Documents/Aquatic_invertebrates_300dpi.pdf>
- Ghosh, S., Majumder, S. and Roychowdhury, T.(2019). Assessment of the effect of urban pollution on surface water – groundwater system of *Adi Ganga*, a historical outlet of river Ganga, *Chemosphere*, 237(1). DOI: 10.1016/j.chemosphere.2019.124507
- Gleick, P.H., Ajami, N., Christian-Smith, J., Cooley, H., Donnelly, K., Fulton, J., Ha, M.L., Heberger, M., Moore, E., Morrison, J., Orr, S., Schulte, P. and Srinivasan, V. (2014). *The World's Water Volume 8, The Biennial Report on Freshwater Resources*. Washington, USA: Island Press. Available from: <<https://islandpress.org/books/worlds-water-volume-8>>

- Gleick, P.H. and Palaniappan M. (2010). Peak water limits to freshwater withdrawal and use, *Proceedings of the National Academy of Sciences (PNAS) of the United States of America*, 107(25): 11155–11162. DOI: 10.1073/pnas.1004812107
- Global Water Partnership (GWP)(2014). *GWP in Action 2014 Annual Report*. Stockholm, Sweden: Global Water Partnership. 1–38. Available from: <https://www.gwp.org/globalassets/global/about-gwp/annual-reports/gwp_annual_report_2014.pdf>
- Godfray, H.C.J., Stephens, A.E.A., Jepson, P.D., Jobling, S., Johnson, A.C., Matthiessen, P., Sumpter, J., Tyler, C.R. and McLean, A.R.(2019). A restatement of the natural science evidence base on the effects of endocrine disrupting chemicals on wildlife, *Proceedings of the Royal Society B: Biological Sciences*, 286(1897): 1–11. DOI: 10.1098/rspb.2018.2416
- Gogoi, A., Mazumder, P., Tyagi, V.K., Chaminda, G.G.T., An, A.K. and Kumar, M.(2018). Occurrence and fate of emerging contaminants in water environment: A review, *Groundwater for Sustainable Development*, 6: 169–180. DOI: 10.1016/j.gsd.2017.12.009
- Gorde, S.P. and Jadhav, M.V.(2013). Assessment of Water Quality Parameters: A Review, *International Journal of Engineering Research and Applications*, 3(6): 2029–2035. Available from: <http://ijera.com/papers/Vol3_issue6/LV3620292035.pdf>
- Graham, M. and Taylor, J. (2018). Development of Citizen Science Water Resource Monitoring Tools and Communities of Practise for South Africa, Africa and The World. *Water Research Commission Report, No. TT763/18*. Pretoria, South Africa: Water Research Commission. Available from: <<http://www.wrc.org.za/wp-content/uploads/mdocs/TT%20763%20web.pdf>>
- Gunawardhana, W., Jayawardana, J.M.C.K. and Udayakumara, E.(2016). Impacts of Agricultural Practices on Water Quality in Uma Oya Catchment Area in Sri Lanka, *Procedia Food Science*, 6: 339–343. DOI: 10.1016/j.profoo.2016.02.068
- Gunnarsson, L., Adolfsson-Erici, M., Björlenius, B., Rutgersson, C., Förlin, L. and Larsson, D.G.J.(2009). Comparison of six different sewage treatment processes – Reduction of estrogenic substances and effects on gene expression in exposed male fish, *Science of the Total Environment*, 407(19): 5235–5242. DOI: 10.1016/j.scitotenv.2009.06.018
- HachCompany(2011). *DR3900 Laboratory Spectrophotometer for water analysis*. [Online] Available from: <<https://www.hach.com/spectrophotometers/dr3900-laboratory-spectrophotometer-for-water-analysis/family-downloads?productCategoryId=35547203834>>
- Haghshenas, A., Hatami-Manesh, M., Mirzaei, M., Sanjari, M.M. and Khezri, P.H.(2017). Measurement and Evaluation of Ecological Risk of Heavy Metals in Surface Sediments of Pars Special

- EconomicEnergyZone, *Iranian South Medical Journal*, 20(5): 448–469. Available from: <<http://ismj.bpums.ac.ir/article-1-898-en.html>>
- Harizanova-Bartos, H., Stoyanova, Z., Todorova, K. and Terziyska, R. (2019). Agricultural impact on environmental pollution on district level, *Trakia Journal of Sciences*, 17(Suppl. 1): 445–450. DOI: 10.15547/tjs.2019.s.01.072
- Harrould-Kolieb, E.R., Huelsenbeck, M. and Selz, V. (2010). *Ocean Acidification*. Washington, USA: Oceana: 1–21. Available from: <https://oceana.org/wp-content/uploads/sites/18/Ocean_Acidification_The_Untold_Stories.pdf>
- Haseena, M., Malik, M.F., Javed, S., Arshad, S., Asif, N., Zulfiqar, S. and Hanif, J.(2017). Water pollution and human health, *Environmental Risk Assessment and Remediation*, 1(3): 16–19. DOI: 10.4066/2529-8046.100020
- Health Protection Agency (HPA) (2004). *Enumeration of coliforms and Escherichia Coli by Idexx (Colilert 18) Quanti-Tray™ (W18), National Standard Method W18(2)*. London, United Kingdom: Standards Unit, Evaluation and Standards Laboratory. Available from: <https://businessdocbox.com/Green_Solutions/85083004-Enumeration-of-coliforms-and-escherichia-coli-by-idexx-colilert-18-quant-tray-tm.html>
- Holmbeck-Pelham, S.A. and Rasmussen, T.C.(1997). ‘Characterization of Temporal and Spatial Variability of Turbidity in the Upper Chattahoochee River’. In: Hatcher, K.J. (Eds). *Proceedings of the 1997 Georgia Water Resources Conference*. Athens, USA: University of Georgia: 72–79. Available from: <<https://smartech.gatech.edu/handle/1853/44387>>
- Hooda, P.S., Edwards, A.C., Anderson, H.A. and Miller, A.(2000). A review of water quality concerns in livestock farming areas, *Science of the Total Environment*, 250(1–3): 143–167. DOI: 10.1016/S0048-9697(00)00373-9
- Huang, J., Yin, H., Chapra, S.C. and Zhou, Q.(2017). Modelling Dissolved Oxygen Depression in an Urban River in China, *Water*, 9(7): 520. DOI: 10.3390/w9070520
- Hussain, M. and Rao, T.V.D.P.(2013). Effect of Industrial Effluents on Surface Water Quality – A Case Study of Patancheru, Andhra Pradesh, India, *Current World Environment*, 8(3). DOI: 10.12944/CWE.8.3.14
- Inyinbor, A.A., Adebisin, B.O., Oluyori, A.P., Adelani-Akande, T.A., Dada, A.O. and Toyin, O.A. (2018). ‘Water Pollution: Effects, Prevention, and Climatic Impact’. In: Glavan, M. (Eds). *Water Challenges of an Urbanizing World*. London, United Kingdom: IntechOpen Limited. DOI: 10.5772/intechopen.72018

- Ishaku, J.M.(2011). Assessment of groundwater quality index for Jimeta-Yola area, Northeastern Nigeria. *Journal of Geology and Mining Research*, 3(9): 219–231. DOI: 10.5897/JGMR.9000006
- Jabeen, S., Mahmood, Q., Tariq, S., Nawab, B. and Elahi, N.(2011). Health impact caused by poor water and sanitation in district Abbottabad, *Journal of Ayub Medical College, Abbottabad*, 23(1): 47–50. Available from: <<https://www.ayubmed.edu.pk/JAMC/23-1/Sadia.pdf>>
- Jiang, B., Zheng, J., Qiu, S., Wu, M., Zhang, Q., Yan, Z. and Xue, Q.(2014). Review on electrical discharge plasma technology for wastewater remediation, *Chemical Engineering Journal*, 236: 348–368. DOI: 10.1016/j.cej.2013.09.090
- Jordaan, K. and Bezuidenhout, C. (2016). Bacterial community composition of an urban river in the North West Province, South Africa, in relation to physico-chemical water quality, *Environmental Science and Pollution Research*, 23(6): 5868–5880. DOI: 10.1007/s11356-015-5786-7
- Keraita, B., Drechsel, P. and Amoah, P.(2003). Influence of urban wastewater on stream water quality and agriculture in and around Kumasi, Ghana, *Environment and Urbanization*, 15(2): 171–178. DOI: 10.1177/095624780301500207
- Khatri, N. and Tyagi, S.(2015). Influences of natural and anthropogenic factors on surface and groundwater quality in rural and urban areas, *Frontiers in Life Science*, 8(1): 23–39. DOI: 10.1080/21553769.2014.933716
- Khudhair, N., Yan, C., Liu, M. and Yu, H.(2019). Effects of Habitat Types on Macroinvertebrates Assemblages Structure: Case Study of Sun Island Bund Wetland, *BioMed Research International*, 2019. DOI: 10.1155/2019/2650678
- Kibena, J., Nhapi, I. and Gumindoga, W.(2014). Assessing the relationship between water quality parameters and changes in landuse patterns in the Upper Manyame River, Zimbabwe, *Physics and Chemistry of the Earth, Parts A/B/C*, 67–69: 153–163. DOI: 10.1016/j.pce.2013.09.017
- Kidd, C., Becker, A., Huffman, G.J., Muller, C.L., Skofronick-Jackson, G. and Kirschbaum, D.B.(2017). So, how much of the Earth's surface is covered by rain gauges?, *Bulletin of the American Meteorological Society*, 98(1): 69–78. DOI: 10.1175/BAMS-D-14-00283.1
- Kiedrzyńska, E., Kiedrzyńska, M., Urbaniak, M., Magnuszewski, A., Skłodowski, M., Wyrwicka, A. and Zalewski, M. (2014). Point sources of nutrient pollution in the lowland river catchment in the context of the Baltic Sea eutrophication, *Ecological Engineering*, 70: 337–348. DOI: 10.1016/j.ecoleng.2014.06.010

- Kilgour, B.W., Francis, A.F. and Mercier, V. (2013). Reducing the Sensitivity of the Water Quality Index to Episodic Events, *Water Quality Research Journal of Canada*, 48(1): 1–13. DOI: 10.2166/wqrjc.2013.008
- Kleynhans, C.J. (1996). A qualitative procedure for the assessment of the habitat integrity status of the Luvuvhu River (Limpopo system, South Africa), *Journal of Aquatic Ecosystem Health*, 5(1): 41–54. DOI: 10.1007/BF00691728
- Kleynhans, C.J., Louw, M.D. and Graham, M. (2008). Module G: EcoClassification and EcoStatus Determination in River EcoClassification: Index of Habitat Integrity (Section 1, Technical Manual), *Water Research Commission Report, No. TT 377/08*. Pretoria, South Africa: Joint Water Research Commission and Department of Water Affairs and Forestry. Available from: <https://www.dws.gov.za/iwqs/rhp/eco/EcoStatus/ModuleG_IHI/IHI_manual_technical.pdf>
- Kleynhans, C.J., Louw, M.D., Thirion, C., Rossouw, N.J. and Rowntree, K. (2005). River EcoClassification: Manual for EcoStatus Determination (Version 1). *Water Research Commission Report, No. KV168/05*. Pretoria, South Africa: Joint Water Research Commission and Department of Water Affairs and Forestry. Available from: <<https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.477.461&rep=rep1&type=pdf>>
- Kleynhans, C.J., Mackenzie, J. and Louw, M.D. (2007). Module F: Riparian vegetation response assessment index in River EcoClassification: Manual for EcoStatus Determination (Version 2). *Water Research Commission Report, No. TT332/08*. Pretoria, South Africa: Joint Water Research Commission and Department of Water Affairs and Forestry. Available from: <https://www.dws.gov.za/iwqs/rhp/eco/EcoStatus/ModuleF_VEGRAl/ModuleF_VEGRAl.pdf>
- Kohler, M.(2016). Confronting South Africa's water challenge: A decomposition analysis of water intensity, *South African Journal of Economic and Management Sciences*, 19(5). DOI: 10.4102/sajems.v19i5.1590
- Komatsu, E., Fukushima, T. and Harasawa, H.(2007). A modeling approach to forecast the effect of long-term climate change on lake water quality, *Ecological Modelling*, 209(2–4): 351–366. DOI: 10.1016/j.ecolmodel.2007.07.021
- Kong, M., Chao, J., Zhuang, W., Wang, P., Wang, C., Hou, J., Wu, Z., Wang, L., Gao, G. and Wang, Y.(2018). Spatial and Temporal Distribution of Particulate Phosphorus and their Correlation with Environmental Factors in a Shallow Eutrophic Chinese Lake (Lake Taihu), *International Journal of Environmental Research and Public Health*, 15(11): 2355. DOI: 10.3390/ijerph15112355
- Kosma, C.I., Lambropoulou, D.A. and Albanis, T.A.(2010). Occurrence and removal of PPCPs in municipal and hospital wastewaters in Greece, *Journal of Hazardous Materials*, 179(1–3): 804–817. DOI: 10.1016/j.hazmat.2010.03.075

- Kostich, M.S., Batt, A.L. and Lazorchak, J.M.(2014). Concentrations of prioritized pharmaceuticals in effluents from 50 large wastewater treatment plants in the US and implications for risk estimation, *Environmental Pollution*, 184C: 354–359. DOI: 10.1016/j.envpol.2013.09.013
- Li, P. and Qian, H.(2018). Water resources research to support a sustainable China, *International Journal of Water Resources Development*, 34(3): 327–336. DOI: 10.1080/07900627.2018.1452723
- Liu, J.L.and Wong, M.H.(2013). Pharmaceuticals and personal care products (PPCPs): A review on environmental contamination in China, *Environment International*, 59: 208–224. DOI: 10.1016/j.envint.2013.06.012
- Liyanage, C.P. and Yamada, K.(2017). Impact of Population Growth on the Water Quality of Natural Water Bodies, *Sustainability*, 9(8): 1405. DOI: 10.3390/su9081405
- Makoe, M.C., Molaba, L.G., van der Merwe, J.and Fourie, F.D.(2015). 'Investigating the potential of using groundwater associated with a ring-dyke to augment the municipality water supply to Bloemfontein', paper presented at the *14th Biennial Ground Water Division Conference and Exhibition, 21-23 September 2015, Muldersdrift, South Africa*: 1–8. Available from: <https://www.researchgate.net/publication/282121659_Investigating_the_Potential_of_Using_Groundwater_Associated_with_a_Ring-Dyke_to_Augment_the_Municipal_Water_Supply_to_Bloemfontein>
- Manzetti, S. and Ghisi, R.(2014). The environmental release and fate of antibiotics, *Marine Pollution Bulletin*, 79(1–2): 7–15. DOI: 10.1016/j.marpolbul.2014.01.005
- Marchand, M.J., Pieterse, G.M. and Barnhoorn, I.E.J.(2008). *Preliminary results on sperm motility and testicular histology of two feral fish species, Oreochromis mossambicus and Clarias gariepinus, from a currently DDT-sprayed area, South Africa*. Pretoria, South Africa: University of Pretoria. Available from: <<https://repository.up.ac.za/handle/2263/8943>>
- Mathebula, B.(2015). *Assessment of the surface water quality of the main rivers feeding the Katse Dam, Lesotho*. Master of Science, University of Pretoria, Pretoria. Available from: <https://repository.up.ac.za/bitstream/handle/2263/53521/Mathebula_Assessment_2015.pdf?sequence=1&isAllowed=y>
- Matthews, M.W. and Bernard, S. (2015). Eutrophication and cyanobacteria in South Africa's standing water bodies: A view from space, *South African Journal of Science*, 111(5/6): 1–8. DOI: 10.17159/sajs.2015/20140193
- McMillan, P.H. (1998). An Integrated Habitat Assessment System (IHAS v2), for the rapid biological assessment of rivers and streams. *A Council for Scientific and Industrial Research (CSIR) project*,

number ENV-P-I 98132 for the Water Resources Management Programme. Pretoria, South Africa: CSIR.

- Meffe, R. and Bustamante, R.(2014). Emerging organic contaminants in surface water and groundwater: A first overview of the situation in Italy, *Science of the Total Environment*, 481: 280–295. DOI: 10.1016/j.scitotenv.2014.02.053
- Metcalf & Eddy Inc. (2004). In: Tchobanoglous, G., Burton, F.L., Stensel, H.D. (Eds). *Wastewater Engineering: Treatment and Reuse, Fourth Edition*. Boston, USA: McGraw-Hill. Available from: <https://www.academia.edu/36512973/Wastewater_Engineering_Treatment_and_Reuse_Fourth_Edition>
- Monaghan, R.M., Wilcock, R.J., Smith, L.C., TikkiSETTY, B., Thorrold, B.S. and Costall, D.(2007). Linkages between land management activities and water quality in a intensively farmed catchment in southern New Zealand, *Agriculture Ecosystem and Environment*, 118(1–4): 211–222. DOI: 10.1016/j.agee.2006.05.016
- Monda, D.P., Galat, D.L. and Finger, S.E.(1995). Evaluating ammonia toxicity in sewage effluent to stream macroinvertebrates: I. A multi-level approach, *Archives of Environmental Contamination and Toxicology*, 28: 378–384. Available from: <<https://link.springer.com/article/10.1007%2FBF00213116>>
- Mpenyana-Monyatsi, L., Onyango, M.S. and Momba, M.N.B.(2012). Groundwater Quality in a South African Rural Community: A possible threat to public health, *Polish Journal of Environmental Studies*, 21(5): 1349–1358. Available from:<<http://www.pjoes.com/Groundwater-Quality-in-a-South-African-Rural-r-nCommunity-A-Possible-Threat-to-Public,88877,0,2.html>>
- Msemburi, W., Pillay-Van Wyk, V., Dorrington, R.E., Neethling, I., Nannan, N., Groenewald, P., Laubscher, R., Joubert, J.D., Matzopoulos, R., Nicol, E., Nojilana, B., Prinsloo, M., Sihole, N., Somdyala, N. and Bradshaw, D.(2014). *Second National Burden of Disease Study for South Africa: cause of death profile South Africa, 1997–2010*. Cape Town, South Africa: South African Medical Research Council. Available from: <<https://www.samrc.ac.za/reports/second-national-burden-disease-study-south-africa-cause-death-profile-report-1997-2012>>
- Mujere, N. and Isaac, R.K.(2017). ‘Rainfall Management for Sustainable Agriculture’.In: Eslamian, S. and Eslamian, F. (Eds). *Handbook of Drought and Water Scarcity*. Boca Raton, USA: CRC Press. 331–344. DOI: 10.1201/9781315226774
- Ncube, E.J. (2009). Selection and Prioritization of Organic Contaminants for Monitoring in the Drinking Water Value Chain. Doctorate of Public Health, University of Pretoria, Tshwane. Available from: <<https://repository.up.ac.za/handle/2263/28574>>

- New South Wales (NSW) Government (2017). *Lower Hunter River Health Monitoring Program, Project Summary Report*. Sydney, Australia: New South Wales Government, Office of Environment and Heritage. 1–18. Available from: <<https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Water/Estuaries/lower-hunter-river-health-monitoring-program-project-summary-report-170191.pdf>>
- Noreen, U., Ahmed, Z., Khalid, A., Serafino, A.D., Habiba, U., Ali, F. and Hussain, M.(2019). Water pollution and occupational health hazards caused by the marble industries in district Mardan, Pakistan, *Environmental Technology & Innovation*, 16.DOI: 10.1016/j.eti.2019.1004701000470.
- Nosrati, K. and Kazemi, Y.(2011). Daily monitoring of drought and water sources in different climates of Iran, *Journal of Range and Watershed Management (Iranian Journal of Natural Resources)*, 64(1): 79–94. Available from: <<https://www.sid.ir/en/Journal/ViewPaper.aspx?ID=202947>>
- OchandaOgola, J.B., Thangwana, N. and Mathews, C.(2009). 'Water use of chickpea: Response to genotype and planting density', *proceedings of the9thAfrican Crop Science SocietyConference, Cape Town, 28 September – 1 October 2009*. 217–219. Available from: <https://www.researchgate.net/publication/288965496_Water_use_of_chickpea_Response_to_genotype_and_planting_density>
- Odume, O.N., Muller, W.J., Arimoro, F.O. and Palmer, C.G. (2012). The impact of water quality deterioration on macroinvertebrate communities in the Swartkops River, South Africa: a multimetric approach, *African Journal of Aquatic Science*, 37(2): 191–200. DOI: 10.2989/16085914.2012.670613
- Oigara, D.K. and Masese,F.O.(2017). Evaluation of the South African Scoring System (SASS 5) Biotic Index for Assessing the Ecological Condition of the Mara River, Kenya, *African Journal of Education, Science and Technology*, 4(2): 41–51. Available from: <<https://www.ajest.info/index.php/ajest/article/view/4>>
- Ollis, D.J. (2005). *Rapid bioassessment of the ecological integrity of the Lourens, Palmiet and Hout Bay Rivers (South Western Cape, South Africa) using aquatic macroinvertebrates*. Master of Science, University of Stellenbosch, Stellenbosch. Available from: <<https://scholar.sun.ac.za/handle/10019.1/20937>>
- Ollis, D.J., Boucher, C., Dallas, H.F. andEsler, K.J. (2006).Preliminary testing of the Integrated Habitat Assessment System (IHAS) for aquatic macroinvertebrates,*African Journal of Aquatic Science*, 31(1): 1–14. DOI: 10.2989/16085910609503866
- Osunmakinde, C.S., Tshabalala, O.S., Dube, S. and Nindi, M.M. (2013). Verification and Validation of Analytical Methods for Testing the Levels of PPHCPs (Pharmaceutical & Personal Health Care Products) in treated drinking Water and Sewage, *Water Research Commission, WRC Report, No.*

- 2094/1/13. Pretoria, South Africa: Water Research Commission. 1–80. Available from: <<http://www.wrc.org.za/wp-content/uploads/mdocs/2094-1-13.pdf>>
- Owa, F.W.(2014). Water pollution: sources, effects, control and management, *International Letters of Natural Sciences*, 8(2014): 1–6. Available from: <<https://biofund.org.mz/wp-content/uploads/2018/11/1543569301-F2305.lns.8.1.Pdf>>
- Patil, P.N., Sawant, D.V. and Deshmukh, R.N. (2012). Physico-Chemical Parameters for Testing of Water – A Review, *International Journal of Environmental Sciences*, 3(3): 1194–1207. DOI: 10.6088/ijes.2012030133028
- Perveen, A. and Zaidi, S.S.(2018). Water Purification: A Review, *European Journal of Pharmaceutical and Medical Research*, 5(3): 193–198. Available from: <https://storage.googleapis.com/journal-uploads/ejpmr/article_issue/1519801263.pdf>
- Petrie, B., Barden, R. and Kasprzyk-Hordern, B.(2015). A review on emerging contaminants in wastewaters and the environment: Current knowledge, understudied areas and recommendations for future monitoring, *Water Research*, 72: 3–27. DOI: 10.1016/j.watres.2014.08.053
- Petrin, Z., Englund, G. and Malmqvist, B. (2008). Contrasting effects of anthropogenic and natural acidity in streams: A meta-analysis, *Proceedings of the Royal Society B: Biological Sciences*, 275(1639): 1143–1148. DOI: 10.1098/rspb.2008.0023
- Puri, P.J., Yenkie, M.K.N., Rana, D.B. and Meshram, S.U.(2015). Application of water quality index (WQI) for the assessment of surface water quality (AmbazariLake), *European Journal of Experimental Biology*, 5(2): 37–52. Available from: <<https://www.imedpub.com/articles/application-of-water-quality-index-wqi-for-the-assessment-of-surface-water-quality-ambazari-lake.pdf>>
- Ramakrishnaiah, C.R., Sadashivaiah, C. and Ranganna, G. (2009). Assessment of Water Quality Index for the groundwater in Tumkur Taluk, Karnataka State, India, *E-Journal of Chemistry*, 6(2): 523–530. DOI: 10.115/2009/757424
- Rand Water (2016). *Where does our water comes from?*[Online] Johannesburg, South Africa: Rand Water, The Water Wise Education Team. Available from: <<https://www.randwater.co.za/CorporateResponsibility/WWE/Pages/WaterOrigination.aspx>>
- Rand Water (2017). *Water Pollution and your Health*. [Online] Johannesburg, South Africa: Rand Water, The Water Wise Education Team. Available from: <<https://www.randwater.co.za/CorporateResponsibility/WWE/Pages/WaterPollution.aspx>>

- Rathore, S.S., Chandravanshi, P., Chandravanshi, A. and Jaiswal, K. (2016). Eutrophication: Impacts of Excess Nutrient Inputs on Aquatic Ecosystem, *IOSR Journal of Agriculture and Veterinary Science (IOSR-JAVS)*, 09(10): 89–96. DOI: 10.9790/2380-0910018996
- Ratikane, M.(2013). *Quality of drinking water sources in the Bloemfontein area of the Mangaung Metropolitan Municipality*. Master of Environmental Health, Central University of Technology, Free State. Available from: <<http://ir.cut.ac.za/handle/11462/210>>
- Rechenmacher, C., Siebel, A.M., Goldoni, A., Klauck, C.R., Sartori, T., Rodrigues, M.T., Rodrigues, M.A.S., Gehlen, G., Ardenghi, P.G. and Silva, L.B.(2010). A multibiomarker approach in rats to assess the impact of pollution on Sinos River, Southern Brazil, *Brazilian Journal of Biology*, 70(4 Suppl): 1223–1230. DOI: 10.1590/s1519-69842010000600012
- Reddick, J. and Kruger, R.(2019). *Water – 2019 Market Intelligence Report*. Cape Town, South Africa: GreenCape: 1-62. Available from: <<https://www.greencape.co.za/assets/Uploads/WATER-MIR-2019-WEB-01-04-2019.pdf>>
- Rehman, K., Fatima, F., Waheed, I. and Akash, M.S.H.(2018). Prevalence of exposure of heavy metals and their impact on health consequences, *Journal of Cellular Biochemistry*, 119(1): 157–184. DOI: 10.1002/jcb.26234
- Roux, D.J.(1997) National Aquatic Ecosystem Biomonitoring Programme (NAEBP): Overview of the design process and guidelines for implementation, *NAEBP Report Series No. 6*. Pretoria, South Africa: Institute for Water Quality Studies, Department of Water Affairs and Forestry. Available from: <<https://www.dws.gov.za/iwqs/rhp/reports/report6/report6.pdf>>
- Rütting, T., Aronsson, H. and Delin, S.(2018). Efficient use of nitrogen in agriculture, *Nutrient Cycling in Agroecosystems*, 110(1): 1–5. DOI: 10.1007/s10705-017-9900-8
- Sarkar, C. and Abbasi, S.A.(2006). Qualidex – A New Software for Generating Water Quality Indices, *Environmental Monitoring and Assessment*, 119(1–3): 201–231. DOI: 10.1007/s10661-005-9023-6
- Saxena, K.L. and Sewak, R. (2016). Livestock Waste and Its Impact on Human Health, *International Journal of Agricultural Sciences*, 6(6), 246–251. Available from: <<https://www.internationalscholarsjournals.com/articles/livestock-waste-and-its-impact-on-human-health.pdf>>
<papers.ssrn.com/sol3/papers.cfm?abstract_id=3085714>
- Schulz, C.J.(2011). Salinisation of running waters, *Limnologica – Ecology and Management of Inland Waters*, 41(2): 79. DOI: 10.1016/j.limno.2011.01.003
- Seaman, M.T., Avenant, M.F., Watson, M., King, J., Armour, J., Barker, C.H., Dollar, E., du Preez, P.J., Hughes, D., Rossouw, L. and van Tonder, G. (2010). Developing a method for determining the

- environmental water requirements for non-perennial systems. *Water Research Commission, WRC Report, No. TT 459/10*. Pretoria, South Africa: Water Research Commission. 1–383. Available from: <http://www.wrc.org.za/wp-content/uploads/mdocs/TT%20459-10%20Conservation%20of%20Water%20Ecosystems.pdf>
- Seanego, K.G. and Moyo, N.A.G.(2013). The effect of sewage effluent on the physico-chemical and biological characteristics of the Sand River, Limpopo, South Africa, *Physics and Chemistry of the Earth, Parts A/B/C*, 66: 75–82. DOI: 10.1016/j.pce.2013.08.008
- Selvanayagam, M. and Abril, R. (2016). Use of Benthic Macro Invertebrates as a Biological Indicator in Assessing Water Quality of River Puyo, Puyo, Pastaza, Ecuador, *American Journal of Life Sciences*, 4(1): 1–12. DOI: 10.11648/j.ajls.20160401.11
- Şener,Ş.,Şener. E. and Davraz, A. (2017). Evaluation of water quality using water quality index (WQI) method and GIS in Aksu River (SW-Turkey), *Science of the Total Environment*, 584–585: 131–144. DOI: 10.1016/j.scitotenv.2017.01.102
- Shah, R., Sharma, U.S. and Tiwari, A. (2013). Evaluation of Drinking Water Quality in Rainy Season near Tekanpur Area, Gwalior, India, *International Journal of Plant, Animal and Environmental Sciences*, 3(1): 34–37. Available from: https://www.fortunejournals.com/ijpaes/admin/php/uploads/271_pdf.pdf
- South Africa (1997). Water Services Act 108 of 1997. Available from: <https://www.gov.za/documents/water-services-act>
- South Africa (1998). National Water Act 36 of 1998. Available from: <https://www.gov.za/documents/national-water-act>
- South African Bureau of Standards (SABS) (2006). *The South African National Standards (SANS) 241, Drinking Water, Edition 6*. Pretoria, South Africa: SABS. Available from: <https://www.del-com.co.za/downloads/sans2412006.pdf>
- South African Bureau of Standards (SABS) (2011). *The South African National Standards (SANS) 241-1, Drinking Water, Edition 6.1*. Pretoria, South Africa: SABS. Available from: <https://www.worldcat.org/title/drinking-water-part-1-microbiological-physical-aesthetic-and-chemical-determinands/oclc/741495685>
- Statistics South Africa (Stats SA)(2013). *Millennium Development Goals, Country Report 2013*. Pretoria, South Africa: Statistics South Africa. 1–140. Available from: https://www.gov.za/sites/default/files/gcis_document/201409/mdgrereport2013.pdf [Accessed: 12/02/2018].

- Statistics South Africa (Stats SA) (2017). *Sustainable Development Goals, Indicator Baseline Report 2017 – South Africa*. Pretoria, South Africa: Statistics South Africa. 1–217. Available from: <http://www.statssa.gov.za/MDG/SDG_Baseline_Report_2017.pdf>
- Statistics South Africa (Stats SA) (2019). *Sustainable Development Goals (SDGs), Country Report 2019– South Africa*. Pretoria, South Africa: Statistics South Africa. 1–288. Available from: <http://www.statssa.gov.za/MDG/SDGs_Country_Report_2019_South_Africa.pdf>
- Strydom, W.F. (2010). *The impact of state-of-rivers reporting on people's attitudes towards river conservation: A case study of the Buffalo & Hartenbos & Klein Brak catchments in South Africa*. Master of Science. University of Stellenbosch, Stellenbosch. Available from: <<https://scholar.sun.ac.za/handle/10019.1/4509>>
- Stuart, M., Lapworth, D.J., Crane, E. and Hart, A. (2012). Review of Risk from Potential Emerging Contaminants in UK Groundwater, *Science of the Total Environment*, 416: 1–21. DOI: 10.1016/j.scitotenv.2011.11.072
- Sulaiman, R., Ismail, Z., Othman, S.Z., Ramli, A.H. and Shirazi, S.M. (2014). A comparative study of trends of nitrate, chloride and phosphate concentration levels in selected urban rivers, *Measurement*, 55: 74–81. DOI: 10.1016/j.measurement.2014.04.035
- Swartz, C.D., Genthe, B., Chamier, J., Petrik, L.F., Tijani, J.O., Adeleye, A., Coomans, C.J., Ohlin, A., Falk, D. and Menge, J.G. (2018). Emerging contaminants in wastewater treated for direct potable re-use: The human health risk priorities in South Africa, Volume II. *Water Research Commission, WRC Report, No. TT 742/2/17*. Pretoria, South Africa: Water Research Commission. 1–83. Available from: <<http://www.wrc.org.za/wp-content/uploads/mdocs/TT%20742%20Vol%202%20web.pdf>>
- Tanjung, R.H.R., Hamuna, B. and Alianto (2019). Assessment of Water Quality and Pollution Index in Coastal Waters of Mimika, Indonesia, *Journal of Ecological Engineering*, 20(2): 87–94. DOI: 10.12911/22998993/95266
- Thibeault, J.M. and Seth, A. (2014). Changing climate extremes in the Northeast United States: observations and projections from CMIP5, *Climate Change*, 127(2): 273–287. DOI: 10.1007/s10584-014-1257-2
- United Nations Children's Fund (UNICEF) and World Health Organisation (WHO) (2009). *Diarrhoea: Why children are still dying and what can be done*. New York, USA: United Nations Children's Fund and World Health Organization. Available from: <http://apps.who.int/iris/bitstream/handle/10665/44174/9789241598415_eng.pdf?sequence=1>

United Nations (UN) (2011). *UN-Water Policy Brief: Water Quality*. Geneva, Switzerland: United Nations Development Programme. 1–19. Available from: <<https://www.unwater.org/publications/un-water-policy-brief-water-quality/>>

United Nations (UN)(2019). *The Sustainable Development Goals Report 2019*. New York, USA: United Nations Development Programme. 1–61. Available from: <<https://unstats.un.org/sdgs/report/2019/The-Sustainable-Development-Goals-Report-2019.pdf>>

United Nations (UN)and World Health Organisation (WHO) (2012). *State of the Science of Endocrine Disrupting Chemicals 2012, Summary for Decision-Makers*. Geneva, Switzerland: United Nations Environment Programme and World Health Organization. Available from: <https://stg-wedocs.unep.org/bitstream/handle/20.500.11822/17015/State_Science_Endocrine_Disrupting_Chemicals.pdf?sequence=1>

United States Environmental Protection Agency (US EPA) (2000). *Proceedings of the Ground-Water/Surface-Water Interactions Workshop*. Washington DC, USA: United States Environmental Protection Agency. 1–91. Available from: <https://www.epa.gov/sites/default/files/2015-06/documents/gsws_workshop.pdf>

United States Environmental Protection Agency (US EPA) (2002). *National Recommended Water Quality Criteria: 2002, EPA-822-R-02-047*. Washington DC, USA: United States Environmental Protection Agency. Available from: <<https://www.epa.gov/sites/default/files/2018-12/documents/national-recommended-hh-criteria-2002.pdf>>

United States Environmental Protection Agency (US EPA) (2008). *Aquatic life criteria for Contaminants of Emerging Concern, Part 1: General Challenges and Recommendations*. Washington DC, USA: United States Environmental Protection Agency, White Paper prepared by OW/ORD Emerging Contaminants Workgroup. 1–32. Available from: <https://www.epa.gov/sites/default/files/2015-08/documents/white_paper_aquatic_life_criteria_for_contaminants_of_emerging_concern_part_i_general_challenges_and_recommendations_1.pdf>

United States Environmental Protection Agency (US EPA) (2009). *Targeted National Sewage Sludge Survey Statistical Analysis Report, EPA-822-R-08-018*. Washington DC, USA: United States Environmental Protection Agency. Available from: <<https://www.epa.gov/sites/default/files/2021-02/documents/tncss-statistical-analysis-report.pdf>>

United States Environmental Protection Agency (US EPA) (2017a). *Climate Impacts on Water Resources*. Washington DC, USA: United States Environmental Protection Agency. Available from: <https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-water-resources_.html>

United States Environmental Protection Agency (US EPA) (2017b). *The Sources and Solutions: Agriculture*. Washington DC, USA: United States Environmental Protection Agency. Available from: <<https://www.epa.gov/nutrientpollution/sources-and-solutions-agriculture>>

- United States Global Change Research Program (USGCRP) (2009). *Global Climate Change Impacts in the United States 2009 Report: Water Resources*. Washington DC, USA: U.S. Global Change Research Program. 41–52. Available from: <<https://downloads.globalchange.gov/usimpacts/pdfs/water.pdf>>
- Vasanthavigar, M., Srinivasamoorthy, K., Vijayaragavan, K., Rajiv Ganthi, R., Chidambaram, S., Ananddhan, P., Manivannan, R. and Vasudevan, S. (2010). Application of water quality index for groundwater quality assessment: Thirumanimuttar sub-basin, Tamilnadu, India, *Environmental Monitoring and Assessment*, 171(1–4): 595–609. DOI: 10.1007/s10661-009-1302-1
- Velasco-Muñoz, J.F., Aznar-Sánchez, J.A., Belmonte-Ureña, L.J. and Román-Sánchez, I.M. (2018). Sustainable Water Use in Agriculture: A Review of Worldwide Research, *Sustainability*, 10(4): 1084. DOI: 10.3390/su10041084
- Wagenhoff, A., Shearer, K. and Clapcott, J. (2016). *A review of benthic macroinvertebrate metrics for assessing stream ecosystem health*, Cawthron Report No. 2852. Nelson, New Zealand: Cawthron Institute, Prepared for Environment Southland. Available from: <<https://www.es.govt.nz/repository/libraries/id:26gi9ayo517q9stt81sd/hierarchy/environment/water/southland-science-programme/ecosystem-health/documents/A%20review%20of%20benthic%20macroinvertebrate%20metrics%20for%20assessing%20stream%20ecosystem%20health.pdf>>
- Ward, M.H., Jones, R.R., Brender, J.D., de Kok, T.M., Weyer, P.J., Nolan, B.T., Villanueva, C.M. and van Breda, S.G. (2018). Drinking Water Nitrate and Human Health: An Updated Review, *International Journal of Environmental Research and Public Health*, 15(7): 1557. DOI: 10.3390/ijerph.1507.1557
- Watts, G., Battarbee, R.W., Bloomfield, J.P., Crossman, J., Daccache, A., Durance, I., Elliot, J.A., Garner, G., Hannaford, J., Hannah, D.M., Hess, T., Jackson, C.R., Kay, A.L., Kernan, M., Knox, J.W., Mackay, J., Monteith, D.T., Ormerod, S.T., Rance, J. ... Wilby, R.L. (2015). Climate change and water in the UK – Past changes and future prospects, *Progress in Physical Geography*, 39(1): 6–28. DOI: 10.1177/0309133314542957
- Welch, D.W., Melnychuk, M.C., Rechisky, E.R., Porter, A.D., Jacobs, M.C., Ladouceur, A., McKinley, R.S. and Jackson, G.D. (2009). Freshwater and marine migration and survival of endangered Cultus Lake sockeye salmon (*Oncorhynchus nerka*) smolts using POST, a large-scale acoustic telemetry array, *Canadian Journal of Fisheries and Aquatic Sciences*, 66(5): 736–750. DOI: 10.1139/F09-032
- Winter, T.C., Harvey, J.W., Franke, O.L. and Alley, W.M. (1998). Ground water and surface water: A single source, *U.S. Geological Survey, Circular 1139*: 1–79. DOI: 10.3133/cir1139
- World Health Organisation (WHO) (2002). *The World Health Report 2002: Reducing Risks, Promoting Healthy Life*. Geneva, Switzerland: World Health Organization. Available from:

<https://books.google.co.za/books?hl=en&lr=&id=ePuQi1PtY_cC&oi=fnd&pg=PR9&dq=World+health+report+2002:+reducing+risks,+promoting+healthy+life.+Geneva:+2002&ots=N4H6f_zhSj&sig=3BUMpPW4K2zphFu-bACaaTrJ-7A#v=onepage&q=World%20health%20report%202002%3A%20reducing%20risks%2C%20promoting%20healthy%20life.%20Geneva%3A%202002&f=false>

World Health Organisation (WHO) (2005). *The Treatment of Diarrhoea: A manual for physicians and other senior health workers*. Geneva, Switzerland: World Health Organization. Available from: <<http://apps.who.int/iris/bitstream/handle/10665/43209/9241593180.pdf?sequence=1>>

World Health Organisation (WHO)(2008). *Guidelines for Drinking-water Quality, 3rd Edition. Volume 1*. Geneva, Switzerland: World Health Organization. Available from: <https://www.who.int/water_sanitation_health/dwq/fulltext.pdf>

World Health Organisation (WHO)(2011). *Guidelines for Drinking-water Quality. Fourth Edition*. Geneva, Switzerland: World Health Organization. Available from: <http://apps.who.int/iris/bitstream/handle/10665/44584/9789241548151_eng.pdf;jsessionid=BC51F4B509670114F49A10A33FDFC035?sequence=1>

World Health Organisation (WHO) (2013). *Water Quality and Health Strategy 2013–2020*. Geneva, Switzerland: World Health Organization. Available from: <<http://www.zaragoza.es/contenidos/medioambiente/onu/998-eng.pdf>>

World Health Organisation (WHO) (2016). *The Situation of Water-related Infectious Diseases in the Pan-European Region*. Copenhagen, Denmark: World Health Organization. Available from: <https://www.euro.who.int/__data/assets/pdf_file/0019/322165/Situation-water-related-infectious-diseases.pdf>

World Health Organisation (WHO) (2017). *Guidelines for Drinking-water Quality, Fourth Edition incorporating the first addendum*. Geneva, Switzerland: World Health Organization. Available from: <<https://apps.who.int/iris/bitstream/handle/10665/254637/9789241549950-eng.pdf>>

World Water Assessment Programme (WWAP)(2015). *The United Nations World Water Development Report 2015: Water for a sustainable world*. Paris, France: United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations World Water Assessment Programme (WWAP). Available from: <<http://www.unesco.org/new/en/loginarea/natural-sciences/environment/water/wwap/wwdr/2015-water-for-a-sustainable-world/>>

World Water Assessment Programme (WWAP)(2017). *The United Nations World Water Development Report 2017: Wastewater, the untapped resource*. Paris, France: United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations World Water Assessment Programme (WWAP). Available from: <<http://www.unesco.org/new/en/natural-sciences/environment/water/wwap/wwdr/2017-wastewater-the-untapped-resource/>>

WWF South Africa (WWF-SA) (2013). *An introduction to South Africa's Water Source Areas*. Cape Town, South Africa: WWF-SA. Available from: <http://awsassets.wwf.org.za/downloads/wwf_sa_watersource_area10_lo.pdf>

WWF South Africa (WWF-SA)(2016). *Water: Facts and Futures*. Cape Town, South Africa: WWF-SA. Available from: <http://awsassets.wwf.org.za/downloads/wwf009_waterfactsandfutures_report_web__lowres_.pdf>

Yang, Y., Ok, Y.S., Kim, K., Kwon, K.K. and Tsang, Y.F.(2017). Occurrence and removal of pharmaceuticals and personal care products (PPCPs) in drinking water and water/sewage treatment plants: A review, *Science of the Total Environment*, 596–597: 303–320. DOI: 10.1016/j.scitotenv.2017.04.102

Zamxaka, M., Pironcheva, G. and Muyima, N.Y.O.(2004). Microbiological and physico-chemical assessment of the quality of domestic water sources in selected rural communities of the Eastern Cape Province, South Africa, *Water SA*, 30(3): 333–340. DOI: 10.4314/wsa.v30i3.5081

Zhang, Y., Chu, C., Li, T., Xu, S., Liu, L. and Ju, M.(2017). A water quality management strategy for regionally protected water through health risk assessment and spatial distribution of heavy metal pollution in 3 marine reserves, *Science of the Total Environment*, 599–600: 721–731. DOI: 10.1016/j.scitotenv.2017.04.232