

CURRICULUM VITAE



Prof. J.F. MACHIWA

1.0 Personal Data

- 1.1 Name: John Ferdinand Machiwa
- 1.2 Nationality: Tanzanian
- 1.3 Name of Place and Date of Birth: Tarime, Tanzania, 14th Sept. 1956
- 1.4 Marital status: married
- 1.5 Department/College: Aquatic Science and Fisheries Technology/ Agricultural Sciences and Fisheries Technology
- 1.6 Address: University of Dar es Salaam
College of Agricultural Sciences and Fisheries Technology
Department of Aquatic Science and Fisheries Technology
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2.0 Education

- 2.1 Schools attended, Level of Education and Dates
 - Shirati Pry. School Primary Education 1963 - 1969
 - Nsumba Sec. School Ordinary Level Ed. 1970 - 1973
 - Moshi Sec School Advanced Level Ed. 1974 - 1975
 - National Service 1976
- 2.2 University/College/Institute attended, Qualification obtained and dates
 - University of Stockholm (Sweden) PhD in Biogeochemistry, 1996 - June 1999.
PhD thesis topic was Fate of organic carbon in a tropical mangrove ecosystem
 - University of Wales (UK) M.Phil. 1986/87 - 1987/88
I studied Chemical Oceanography. The M.Phil thesis topic is Geochemical cycling of trace metals in a polluted environment.
 - University of Dar es Salaam B.Sc (Ed) 1981/82 - 1983/84
I studied Chemistry, Botany and Education.
 - Kunduchi Fisheries Institute Dip.Fisheries 1977 - 1979
I studied both fresh water and marine science subjects.

3.0 Academic Posts Held at University of Dar es Salaam

Tutorial Assistant	1984 - 1987
Assistant Lecturer	1987 - 1993
Lecturer	1993 - 2000
Senior Lecturer	2000 – 2005

Associate Professor 2005 – 2011
Professor 2011 – To date

4.0 Other Duties and Awards

4.1 Administrative posts held at University of Dar es Salaam

Head, Department of Aquatic Environment and Conservation 2002 – 2006
Dean, Faculty of Aquatic Sciences and Technology 2007 – 2009
Deputy Principal – Administration Mkwawa University College of Education, a
Constituent College of the University of Dar es Salaam 2009 – 2012.
Acting Principal – College of Agricultural Sciences and Fisheries Technology,
University of Dar es Salaam from 2015 - to date.
Member of the Tender Board of the University of Dar es Salaam from 20th January
2016 – to date.

4.2 Other duties within and outside the University of Dar es salaam

Coordinator, Support to Riparian University Component of Lake Victoria
Environmental Management Project (LVEMP) Phase I 1998 – 2008.
Coordinator Sida/SAREC Bilateral Marine Programme (FAST) 2002 – 2008.
Coordinator PUMPSEA project (FAST) 2005 – 2008.
Board member Tanzania Fisheries Research Institute 2009 – 2012.
Member of Board of Trustees Marine Parks and Reserves Unit 2009 – 2012.
Member of the LVEMP phase II National Technical Advisory Committee 2009 –
to date.
Chairman of the Board of Trustees of the Marine Parks and Reserves Unit 01st
October 2015 – 16th April 2018.

4.3 Awards

British Council scholarship 1986 – 1988
Sida/SAREC Regional Programme in Marine Sciences 1995 – 1999
Best Worker (Academic) University of Dar es Salaam – 2005

5.0 Posts held outside University of Dar es Salaam

Fisheries Assistant (Ministry of Natural Resources and Tourism) 1979 - 1982
Asst. Fisheries Officer (Ministry of Natural Resources and Tourism) 1982 - 1984

6.0 Teaching/Supervision

6.1 Undergraduate teaching

I teach the following courses:

(1).Oceanography (2).Aquatic Resources and Management (3).Aquatic Pollution
(4). Aquatic Biology (5). Water Quality and Pollution control

6.2 Postgraduate teaching and research

6.2.1 I am teaching Aquatic Ecology and Pollution (Master of Integrated Environmental
Management)

6.2.2 I have supervised/examined the following:

6.2.2.1. MSc-Aspects of heavy metal pollution in Mwanza Gulf of Lake Victoria by Ms.
Mary A. Kishe.(2001)

- 6.2.2.2. MSc-Some aspects of heavy metal contamination of Mangrove ecosystems in Tanzania by Ms. Sarah Mremi. (2001).
- 6.2.2.3. MSc- A study of mercury levels in some selected animal tissues at Mgusu mining area, Geita in Mwanza, Tanzania. By Ms. Hilda D. Lyatuu (2002)
- 6.2.2.4. MSc- The influence of land-use patterns in the Ruvu River watershed on Water quality in the river system by Ms. Elizabeth Ngoye (2004)
- 6.2.2.5. MSc- Nutrients and phytoplankton dynamics in selected area in Lake Victoria, Tanzania by Ms. Salome Shayo (2007)
- 6.2.2.6. MSc- Assessment of heavy metal pollution in sediment and biota in Kizinga stream, Mtoni, Dar es Salaam by Ms. Maimuna Hassan (2006)
- 6.2.2.7. PhD-Biogeochemical processes and the impact of the hydropower dam along the Kihansi River by Ms. Radhia Ideva (University of Vienna, IECB) (continuing)
- 6.2.2.8. PhD- Phytoplankton production and nitrogen fixation in relation to physico-chemical factors in southern Lake Victoria by Pazi Semili (continuing)
- 6.2.2.9. PhD- Nutrients dynamics and phytoplankton productivity in Pangani estuary, Tanzania by Sihaba Mwaitega (continuing)
- 6.2.2.10. External examiner- School of Environmental Studies, Moi University D.Phil. thesis “Cleaner Production Potential at Rupa Woolen Textile Mill, Eldoret, Kenya”, by Starovoitova D. Madara.
- 6.2.2.11. MSc- Levels and distribution of PAHs in interstitial water, surface sediment and oysters from the intertidal areas of Dar es Salaam coast by Lydia Gaspare Kenyairita (2006)
- 6.2.2.12. MSc (Environmental Science)– Heavy metal pollution in sediment, water and fauna from Mzinga Creek and Ras Dege mangrove ecosystems, Dar es Salaam. Augustina Mtanga (2007)
- 6.2.2.13. PhD – Temporal variations in stable carbon and nitrogen isotopes composition and heavy metal levels in coral reef and sediment cores off Dar es Salaam and Zanzibar by Ophrey Ilomo (continuing)
- 6.2.2.14. PhD – Wetland processes governing the buffering of nitrogen and phosphorus in Nyashishi wetland, Lake Victoria. Baraka Sekadende (2015)
- 6.2.2.15. Master of Integrated Environmental Management (MIEM)- Nitrogen nutrients removal efficiency of constructed mangrove wetland. Edwin S. Gomezulu (2007)
- 6.2.2.16. Examined M.Env.Studies thesis “Effects of pollution on the Motoine River Dams, Kenya” by Mr. Rogan L. Miheso (2008)
- 6.2.2.17. Examined M.Env.Studies thesis “Solid waste management practices in Machakos Town, Kenya” by Ms. Margaret K. Masaku (2008)
- 6.2.2.18. PhD – The impact of grazing on plant species diversity, water and soil physico-chemical parameters in Kilombero flood plain. Godfrey Frederk (2014)
- 6.2.2.19. PhD – Anthropogenic and climatic influences on nutrient and organic matter dynamics in the Rufiji Delta mangroves, Tanzania. Andrew Minu (continuing)
- 6.2.2.20. PhD – Determination of selected heavy metals and their protein expression in blood cockles, *Anadara antiquata* L. 1758, along the coastal areas of Tanzania Joyce John Kulekana (continuing)
- 6.2.2.21. PhD – Biomagnification of radionuclides, heavy metals and organo-chlorines in the food chain from marine environment along the coast of Tanzania. Sharifa Bungala (continuing)

- 6.2.2.22. PhD - Investigation on the Sources of Organic Matter and Trophic Interactions by using Fatty Acid Biomarkers and Stable Isotopes in Pangani Estuary, Tanzania. Mwijage, Alistidia Paul (continuing)
- 6.2.2.23. PhD- Establishemnt fo Environmental Quality Criteria for Tanzanian Coastal Marine and Freshwater Systems. Mwakisunga Benard (Just started)

7.0 Conferences and workshops attended

- 7.1 Attended a course on Analytical techniques in Marine chemistry at the University of Oslo, Nov.1989 - June 1990
- 7.2 Attended workshop on nutrients dynamics in the marine environment at IMS - Zanzibar, June 1991.
- 7.3 Attended workshop on Intercalibration exercise - Nutrients analysis at IMS - Zanzibar, Nov. 1991.
- 7.4 Attended a training workshop on ERS 1 and SPOT (remote sensing) as a complimentary method of coastal resources management in July, 1992.
- 7.5 Attended workshop on Biogeochemical cycles in the Marine environment in Zanzibar, Nov, 1992 and Seychelles, April, 1995
- 7.6 Attended workshop on Intercalibration - Nutrient analysis at KMFRI - Mombasa, April, 1994.
- 7.6 Attended a course on Experimental design, at IMS April 1997
- 7.7 Ecology, physiology and management of mangroves, IMS December 1997
- 7.8 Attended Lake Victoria Environmental Management Project (LVEMP) National Scientific conference in Mwanza- 6th - 10th August, 2001.
- 7.9 Attended Lake Victoria Environmental Management Project Regional Scientific conference in Kisumu, Kenya 3rd - 7th December, 2001.
- 7.10 Attended a workshop by InWEnt on Integrated Coastal Management (COASTMAN Regional milestone and Training workshop) in Maputo 20th – 26th February 2005.
- 7.11 Attend stakeholder workshop on Lessons Learnt from LVEMP I implementation in Mwanza, 11th to 13th August 2005.
- 7.12 Attended a stakeholder workshop on Transboundary diagnostic analysis for the Lake Victoria basin, Mwanza, 19th to 22nd March 2006.
- 7.13 Attended workshop of Regional working group on Water, Sediment and Biota quality component of the UNEP/GEF-WIO-Lab Project “Addressing Land-based Activities in the Western Indian Ocean”, Durban, RSA, 3rd to 6th August 2005.
- 7.14 Attended a Regional Train of trainer COASTMAN Southern Africa workshop on Integrated Coastal Zone Management and the concept of marine/coastal protected areas organized by InWent. Cape Town, RSA, 19th to 25th Nov. 2006.
- 7.15 Attended workshop of Regional working group on Water, Sediment and Biota quality component of the UNEP/GEF-WIO-Lab Project “Addressing Land-based Activities in the Western Indian Ocean”, Mauritius, 7th to 11th February 2006.
- 7.16 Attended second annual workshop on Peri-urban mangroves as filters and potential phytoremediators of domestic sewage in East Africa (PUMPSEA), EU funded, Maputo-Mozambique, 19th to 25th February 2006
- 7.17 Attended second annual workshop on Peri-urban mangroves as filters and potential

- phytoremediators of domestic sewage in East Africa (PUMPSEA), EU funded, Mombasa, 4th to 9th February 2007
- 7.18 Attended workshop of Regional working group on Water, Sediment and Biota quality component of the UNEP/GEF-WIO-Lab Project “Addressing Land-based Activities in the Western Indian Ocean”, Maputo-Mozambique 18th to 20th July 2007

8.0. Publications

8.1 Publication in refereed journal

- 8.1.1. Machiwa, J.F. 1992. Trace metals in coastal sediments off Dar es Salaam, Tanzania *Environment International*, 18: 409-415
- 8.1.2. Machiwa, J.F., Mgaya, Y.D. and Ndaro, S.G.M. 1992. A preliminary consideration of the role of Mangroves in nutrient and organic fluxes in the Rufiji delta system, Tanzania. *East African Journal of Science* (Biological series) 1: 15-27
- 8.1.3. Machiwa, J.F. 1992. Anthropogenic pollution in the Dar es Salaam harbour area, Tanzania. *Marine Pollution Bulletin*, 24: 562-567
- 8.1.4 Machiwa, J.F. and Hallberg, R.O. 1995. Flora and crabs in a mangrove forest partly distorted by human activities, Zanzibar. *Ambio* 24: 492-496
- 8.1.5. Machiwa, J.F. 1998. Distribution and remineralization of organic carbon in sediments of a mangrove stand partly contaminated with sewage waste. *Ambio* 27: 740-744
- 8.1.6. Machiwa, J.F. 1999. Lateral fluxes of organic carbon in a mangrove forest partly contaminated with sewage waste. *Mangroves and Salt marshes* 3: 95-104.
- 8.1.7 Machiwa, J.F. 2000. Heavy metals and organic pollutants in sediments of Dar es Salaam harbour prior to dredging in 1999. *Tanzania Journal of Science* 26: 29-45
- 8.1.8. Machiwa, J.F. 2000. $\delta^{13}\text{C}$ signatures of flora, macrofauna and sediment of a mangrove forest partly affected by sewage wastes. *Tanzania Journal of Science* 26: 15-27
- 8.1.9. Machiwa, J.F. and Hallberg, R.O. 2002. An empirical model of the fate of organic carbon in a mangrove forest partly affected by anthropogenic activity *Ecological Modelling* 147: 69-83
- 8.1.10. Kische, M.A. and Machiwa, J.F. 2003. Distribution of heavy metals in sediments of Mwanza Gulf of Lake Victoria, Tanzania. *Environment International* 28: 619-625
- 8.1.11 Mremi, S.D. and Machiwa, J.F. 2003. Heavy metal contamination of mangrove

sediments and the associated biota in Dar es Salaam, Tanzania. *Tanzania Journal of Science* 29 (No 1): 61-76

8.1.12 Machiwa, J.F. 2003. Metal concentrations in sediment and fish of Lake Victoria near and away from catchments with gold mining activities. *Tanzania Journal of Science* 29 (No.2): 43-54

8.1.13 Machiwa, J.F. 2003. Concentrations of metals in river sediment and wetland vegetation in mining sites, Lake Victoria basin, Tanzania. *Tanzania Journal of Science* 29(No.2): 81-88

8.1.14 Machiwa, J.F., Lugomela, C., Muzuka. A.N.N. 2004. Phytoplankton and nutrients studies in Magu Bay, Speke Gulf, Lake Victoria, (Tanzania), following the 2001 principal rain season. *Tanzania Journal of Science* 30 (1): 33 - 42

8.1.15 Machiwa, J.F. 2004. Total mercury concentration in common fish species of Lake Victoria, Tanzania. *Tanzania Journal of Science* 30 (2): 11 - 20

8.1.16 Ngoye, E. and Machiwa, J.F. 2004. The influence of land-use patterns in the Ruvu River watershed on water quality in the river system. *Physics and Chemistry of the Earth* 29: 1161-1166

8.1.17 Taylor, H, Chitamwebwa, D, Mkumbo, O, **Machiwa, JF**, Appleton, JD, Lister, R, Smith, B, Tesha, AL, Beinhoff, C and Veiga, M. 2004. Exposure to environmental mercury in the Rwamagasa artisanal gold mining area, Geita District, Tanzania. *Materials and Geoenvironment* 51: 290-293

8.1.18 Taylor, H, Appleton, J.D, Lister, R., Smith, B., Chitamwebwa, D., Mkumbo, O., **Machiwa, J.F.**, Tesha, A.L. and Beinhoff, C. 2005. Environmental assessment of mercury contamination from the Rwamagasa artisanal gold mining centre, Geita District, Tanzania. *Science of the Total Environment* 343: 111-133

8.1.19 Machiwa J.F. 2005. Metals in Nile perch (*Lates niloticus*) and Suspended Particulate Matter from Lake Victoria, Tanzania. *Journal of Environmental Science and Health Part A* 40 (9): 1809 - 1822

8.1.20 Muzuka, A.N.N., Machiwa, J.F., Lugomela, C. 2005. Recent trends in Accumulation rate, elemental and isotopic composition of organic matter in the Magu Bay, Lake Victoria. *Tanzania Journal of Science* 31 (1) 23 - 34

8.1.21 Mtanga A. and Machiwa J.F. 2007. Heavy metal pollution levels in water and oysters, *Saccostrea cucullata*, from Mzingu Creek and Ras Dege mangrove ecosystems, Tanzania. *African Journal of Aquatic Science* 32 (3): 235 - 244

8.1.22 Mtanga, A. and Machiwa, J.F. 2007. Assessment of heavy metal pollution in

sediment and polychaete worms from the Mzinga Creek and Ras Dege mangrove ecosystems, Dar es Salaam, Tanzania. *Western Indian Ocean J. Mar. Sci.* 6(2) 125 – 135

8.1.23 Kazungu, JM, Kuschk, P, Kristensen, E, Vanninni, M, Koedam, N, Baya, B, Bandeira, SO, **Machiwa, J**, Mbwette, T, Kautsky, N, Guerreiro, J and Paula, J. 2008. Peri-urban mangrove forests as filters and potential phytoremediators of domestic sewage in East Africa. Institute of Applied Sciences and Technology, Portugal

8.1.24 Ideva, RJ., Machiwa, J. Schiemer F and Hein, T. 2008. Effect of an impoundment on nutrient dynamics in the Kihansi River, Tanzania. *African J. Aquatic Sci.* 33: 181-188

8.1.25 Gaspare L., Machiwa, J.F., Mdachi, SJ.M., Streck, G. and Brack, W. 2009 Polycyclic aromatic hydrocarbons (PAH) contamination of surface sediments and oysters from the intertidal areas of Dar es Salaam, Tanzania. *Environmental Pollution* 157: 24-34

8.1.26 Machiwa, J.F. 2010 Nature of suspended particulate matter and concentration of Heavy metals in sediment in the southern part of Lake Victoria, East Africa. *African Journal of Aquatic Science* 35(1): 95-101.

8.1.27 Machiwa, J.F. 2010 Stable carbon and nitrogen isotopic signatures of organic matter sources in the southern part of Lake Victoria. *Journal of Great Lakes Research* 36: 1 – 8.

8.1.28 Machiwa, J.F. 2010 Heavy metal levels in paddy soils and rice (*Oryza sativa* (L)) from wetlands of Lake Victoria Basin, Tanzania.. *Tanzania Journal of Science* 36: 59-72.

8.1.29 Machiwa, J.F. 2010 Coastal marine pollution in Dar es Salaam (TANZANIA) relative to recommended environmental quality targets for the Western Indian Ocean. *WIO Journal of Marine Science* 9: 303 - 312

8.1.30 Shayo S.D., Lugomela C., Machiwa J.F. 2011. Influence of land use patterns on Some limnological characteristics in the south-eastern part of Lake Victoria, Tanzania *Aquatic Ecosystems Health and Management* 14:3, 246 - 251

8.1.31 Mangion P., Macia A., Rosário A., Mwangi S., **Machiwa J.F**, Kristensen E., Frank Dehairs F. Tracing the fate and pathways of sewage-derived carbon and nitrogen in mangrove ecosystems: consequences for epibenthic communities (Submitted, Marine Ecology Progress Series)

8.1.32 Morrison R.J., Zhang J., Urban Jr. E.R., Hall J., Ittekkot V., Avril B., Hu L., Hong G.H., Kidwai S., Lange C.B., Lobanov V., **Machiwa J.**, San Diego-McGlone M.L., Oguz T, Plumley F.G., Yeemin T., Zhu W. and Zuo F. 2013. Developing human capital for

successful implementation of international marine scientific research projects *Marine Pollution Bulletin* **77**: 11-22.

8.1.33 Sekadende BC, Machiwa JF and Mwanuzi FF 2014. Processes Governing the Retention of Phosphorus and Nitrogen in Nyashishi Wetland. *Open Journal of Ecology* **4**: 124-134

8.1.34 Kamau JN, Kuschk P, **Machiwa J**, Macia A, Mothes S, Mwangi S, Munga D and Kappelmeyer U. 2015 Investigating the distribution and fate of Al, Cd, Cr, Cu, Mn, Ni, Pb and Zn in sewage-impacted mangrove-fringed creeks of Kenya, Tanzania and Mozambique. *Journal of Soils and Sediments* **15** (12): 2453-2465

8.1.35 Scheren P., Diop S., Machiwa J. and Ducrottoy J.P. 2016. The Western Indian Ocean: A Wealth of Life-Supporting Ecosystem Goods and Services. In: *Estuaries: a Lifeline of Ecosystem Services in the Western Indian Ocean*. Diop S., Scheren P. and Machiwa J. (Eds) Springer International Publishing AG Switzerland. pp. 1 – 23.

8.1.36. Diop S., Machiwa J. and Scheren P. 2016. Future Outlook: The Importance of a Science and Ecosystem-based Approach for the Sustainable Management of Estuaries and Their Life-Supporting Ecosystem Services in the Western Indian Ocean. In: *Estuaries: a Lifeline of Ecosystem Services in the Western Indian Ocean*. Diop S., Scheren P. and Machiwa J. (Eds) Springer International Publishing AG Switzerland. pp. 313 – 316.

8.1.37 Bungala SO., Machiwa JF., Shilla DA., 2017. Concentration and Biomagnification of Heavy Metals in Biota of the Coastal Marine Areas of Tanzania. *Journal of Environmental Science and Engineering* **B6**: 406-424

8.1.38 Minu A., Routh J., Dario M., Bilosnic M., Kalén R., Klump Val J. and Machiwa J.F. 2018. Temporal and spatial distribution of trace metals in the Rufiji Delta mangrove, Tanzania. *Environ. Monit. Assess.* **190**: 336 - 354.

8.2 Book and chapters in Books

8.2.1. Machiwa J, Rutagemwa D, Rwetabula J, Myanza O, Mnyanga V, Lupeja P. and Mwanuzi F. Pesticides and Metal Contamination. In: Lake Victoria Water Quality and Management, Chap. 10. (In press)

8.2.2. Diop S., Scheren P. and Machiwa J. (Eds) 2016. Estuaries: a Lifeline of Ecosystem Services in the Western Indian Ocean. Estuaries of the World Book Series. Springer International Publishing AG Switzerland. 322pp.

8.2.3. Peter Harris, José Muelbert, Pablo Muniz, Kedong Yin, Kawser Ahmed, Regina Folorunsho, Margarita Caso, Claudia Câmara Vale, **John Machiwa**, Beatrice Ferreira, Patricio Bernal and Jake Rice. 2016. Chapter 44: Estuaries and Deltas, *The First Global Integrated Marine Assessment World Ocean Assessment I* (the Group of Experts of the

Regular Process, Lorna Inniss and Alan Simcock). Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, United Nations

8.3 Conference Proceedings

- 8.3.1. Machiwa, J.F. 1989. Heavy metal load in Estuarine Sediments contaminated by acidic mine drainage. *Proceedings of workshop on Environmental Pollution and its Management in Eastern Africa*. Faculty of Science, UDSM, 11th - 15th Sept.1989. p.236 -240.
- 8.3.2. Shunula, J.P. and Machiwa, J.F. 1990. Seagrass and algae surveys in the Malindi National Marine park and Diani beach, Kenya. In: Coral ecosystems workshop, Malindi, Kenya. 25th sept. - 6th Oct. 1989. Rapport technique No. 2 COMAR/UNESCO. p. 38-44
- 8.3.3. Kische, M.A and Machiwa, J.F 2001. Heavy metal content in *Oreochromis niloticus* (Linn. 1757) from Mwanza Gulf, Lake Victoria, Tanzania. In: Ndaru, S.G.M. and Kishimba M. (eds). Sharing of Knowledge, information and Experience among stakeholders in Lake Victoria Basin. Proceedings of the LVEMP-Tanzania 2001 Scientific Conference, 6th - 10th August, 2001, Mwanza, Tanzania. p. 117-127
- 8.3.4. Kische, M.A. and Machiwa, J.F. 2002. Mercury levels in sediment and fish (*O. niloticus*) from Mwanza Gulf of Lake Victoria, Tanzania. In: Mgaya, Y.D., Msaki, P.K. and Kivaisi, A.K. (eds) Current Trends in Environmental Science Research in Eastern Africa. Proceedings of an International Symposium on Scientific Research on Environment. September 23rd – 26th, 2002. Dar es Salaam, Faculty of Science. p. 146-152

8.4 Non refereed publication/reports

- 8.4.1 Machiwa, J.F. 1988. Geochemical cycling of heavy metals in a polluted estuarine environment. M.Phil. thesis, University of Wales (UK)
- 8.4.2 Machiwa, J.F. 1999. Fate of organic carbon in a tropical mangrove forest. PhD dissertation, University of Stockholm (Sweden).
- 8.4.3 Mgaya, Y.D., **Machiwa, J.F.**, Lugomela, C., Lyimo, T., Joseph, C., Muzuka, A., Shaghude, Y., Mvungi, A., Mapunda, B. and Mwanuzi, F.L. 2004. Environmental studies of Mtoni Mangrove ecosystem, Dar es Salaam. Faculty of Science, UDSM. 105 pp.
- 8.4.4. Machiwa, J.F. 2006. Water mediated transport of sewage in a mangrove ecosystem. Work Package 3 Report. Peri-Urban Mangroves Forests as Filters and Potential Phytoremediators of Domestic Sewage In East Africa (PUMPSEA). Commission of the European Communities, Research Directorate - General. INCO, Contract no. 510863
- 8.4.5. Ministry of Water 2008. Lake Victoria Environmental Management Project: National Project Document. Submitted to the World Bank by the Ministry of Water, Tanzania.
- 8.4.6. Ministry of Water 2007. Monitoring and Evaluation Framework for Lake Victoria Environmental Management Project Phase II. Submitted to the World Bank by the Ministry of Water, Tanzania.
- 8.4.7. Ministry of Water 2007. The Baseline Survey of Lake Victoria Basin for Lake

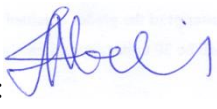
Victoria Environmental Management Project Phase II. Submitted to the World Bank by the Ministry of Water, Tanzania.

8 5 Consultancy Reports

- 8.5.1. Machiwa, J.F., Y.D. Mgaya, S.G.M. 1991. Environmental impact assessment study of the proposed Dar es Salaam harbour expansion project. Report for Scott Bertlin consulting Engineers and Planners (Surrey, England). 35p.
- 8.5.2 Ndaró, S.G.M. and Machiwa, J.F. 1991. Biological information on prawn culture techniques. Prepared for M/S Mehboob H. Hashim, Director of Prawn culture project - Tanzania. 40p.
- 8.5.3 Machiwa, J.F. and Benno, B.L. 1992. Environmental impact assessment of the proposed extension of the Songo Songo jetty. Report for Scott Bertlin Consulting Engineers and Planners (UK). 30p.
- 8.5.4 Machiwa, J.F., Ndaró, S.G.M., Benno, B.L. and Mziray, G.L. 1993. Dar es Salaam Port Development Study 1994 - 2004; Environmental Study Report. Prepared for S.L.I. consultants, c/o Lea Nedco J.V. Dar es Salaam. 35p.
- 8.5.5. Tamatamah, R., Benno, B., Machiwa, J., and Lyimo, T. 1994. Studies of the Limnology and Fisheries of the Mtera reservoir (Ten years after the impoundment). Report commissioned by SWECO consultants, Stockholm
- 8.5.6 Machiwa, J.F., Muzuka, A.N.N., Dubi, A.M., Ndaró, S.G.M and Lugomela, C. 2003. Sedimentation studies at the Simiyu River mouth (Magu Bay, Speke Gulf), Lake Victoria, Tanzania. Report submitted to Lake Victoria Environmental Management Project. 97pp
- 8.5.7 Machiwa, J.F., Kishe, M.A., Mbilinyi, H.G., Mdamo, A. and Mnyanza, O, 2003. Impact of gold mining in Lake Victoria Basin on mercury levels in the environment. Report submitted to Lake Victoria, Tanzania. Report submitted to Lake Victoria Environmental Management Project. 46pp
- 8.5.8 Machiwa, J.F. 2004. Levels of some toxic metals and organochlorine pesticide residues in Lower Kihansi River water and sediment. A report submitted to Lower Kihansi Environmental Management Project, Vice President's Office, Dar es Salaam.
- 8.5.9 Misana, S.B., R.D. Toba, K.N. Njau, J.H.Y. Katima, **J. Machiwa**, E.A.M. Mjema, B.A.T. Kundi and A.A. Mvungi. 2006. National Framework: Monitoring and Communication for the Lake Victoria Basin. A report submitted to Ministry of Water (MTB/VPO/2004/2005/03) by Bureau for Industrial Cooperation (BICO).
- 8.5.10 Njau, K.N., J.H.Y. Katima, B.A.T. Kundi, S.B. Misana, Y. Mgaya, P. Yanda, **J. Machiwa**, R.D. Toba 2006. Applied Research Programme for Lake Victoria Basin. A report submitted to Ministry of Water (MTB/VPO/2004/2005/03) by Bureau for Industrial Cooperation (BICO).
- 8.5.11 MoWI 2008 Project Document, Lake Victoria Environmental Management Project Phase II submitted by The Ministry of Water and Irrigation, United Republic of Tanzania.
- 8.5.12 Machiwa, J.F. and Mamboya, F. 2007. Swedish Ethanol Chemistry AB

(SEKAB) Bioenergy Project: Inventory of Fauna and Flora in the intertidal area in Kitame, Bagamoyo. Prepared for Orgut Consulting AB, Svartmangatan 9, 111 29 Stockholm, Sweden.

8.5.13 Machiwa, J.F., Shilla, D., Wagner, G.M. and Kabigumila, J. 2008. Report on Aquatic Ecosystems short course conducted from 6th – 20th June 2008 at Grand Imperial Hotel, Kampala for Applied Training Project, Nile Basin Initiative.

Signature: 

Date: 28th April 2018