



**Dr. Jackson Efitre**

**Contact details**

Department of Zoology, Entomology and Fisheries Sciences,  
College of Natural Sciences, Makerere University,  
PO BOX 7062,  
Kampala,  
Uganda

**Telephone(s):**+256 (0)414 531902, Mobile: (+256)773413144

**Skype:** jefitre88

**E-mails:** jefitre@cns.mak.ac.ug/ jefitre@gmail.com/jefitre@yahoo.com

**Specialisation:**

Aquatic ecology; Fisheries management, Aquaculture, fish biology, and ecology; Biodiversity Assessments; Water Quality Assessment and monitoring, Climate Change and GIS.

**Current Position:** Senior Lecturer.

**Educational & Professional Achievements:**

- PhD in Zoology (Fisheries and Aquatic Sciences), University of Florida (USA);
- MSc in Fisheries and Aquatic Sciences; Makerere University (Uganda);
- BSc. (Hons) in Zoology; Makerere University (Uganda).
- Certificates in Chemicals & Waste Management in Oil and Gas sector; Geographic Information Systems; project planning and management; GEONETCAST for Water and Natural Resources Management; Statistical Downscaling of Global Climate Models using SDSM 5.2 (Smithsonian Conservation Biology Institute, Front Royal, VA, USA).

**Key Experience:**

- Research in water quality, freshwater ecology, fisheries and aquaculture, biodiversity conservation, sustainable development and climate change;
- Development and implementation of climate change research projects;
- Supervision and mentoring of graduate and undergraduate students;

- Curriculum review and development;
- Stakeholder consultations and strategy development;
- Capacity building in environmental conservation and climate change.

### **Courses taught**

Undergraduate courses taught include Biology and Ecology of Fishes, Fisheries Science, Fish Breeding and Applied Endocrinology, Fisheries Socioeconomics & Fisheries Management, Hydrobiology, Limnology, Design and Construction of Fishing Gear and Technology, Stock Assessment and Fisheries Management, Aquaculture Systems, Environmental Protection and Impact Assessment, Biostatistics, Geographic Information Systems, and research projects.

Graduate courses include Advanced Biostatistics, Advanced Fish Population Dynamics; Student supervision (Masters/PhD); Dissertation examination; and Research.

### **University Assignments**

2017 –to-date Examinations Coordinator, Department of Zoology, Entomology and Fisheries Sciences

2016 – 2017 Member of the Makerere University Oil and Gas Curriculum and Research committee (OCRC) under the USAID-funded Environment Management of the Oil and Gas Sector (EMOS) Project.

2010 –to-date Coordinator, Bachelor of Fisheries and Aquaculture (BFA) Program

2010 – 2013 Coordinator Undergraduate Research Projects

### **Recent Publications**

1. **Efitre J.**, Natugonza V., Musinguzi L., Olokotum M., Naigaga S., Ogutu-Ohwayo R. (2017) Building Capacity for Climate Change Mitigation and Adaptation Through Mainstreaming Climate Change in Curricula of Tertiary Training Institutions in Africa. *In: Leal Filho W. (eds) Climate Change Research at Universities. Springer, Cham.*
2. Laban Musinguzi, Vianny Natugonza, **Jackson Efitre** & Richard Ogutu-Ohwayo (2017): The role of gender in improving adaptation to climate change among small-scale fishers, *Climate and Development*, DOI: 10.1080/17565529.2017.1372262.
3. **Jackson Efitre**, Debra J. Murie, Lauren J. Chapman (2016) Age validation, growth and mortality of introduced *Tilapia zillii* in Crater Lake Nkuruba, Uganda, *Fisheries Management and Ecology* 23, 66–75. doi: 10.1111/fme.12163
4. Natugonza V., Ogutu-Ohwayo R., **Efitre J.**, Muyodi F., Mbabazi D., Olokotum M., Musinguzi L., Naigaga S., & Namboowa S. (2015) The responses of Nile tilapia *Oreochromis niloticus* (Linnaeus, 1758) in Lake Wamala (Uganda) to changing climatic conditions, *Lakes and Reservoirs: Research and Management* 20: 101–119. Doi: 10.1111/lre.12091
5. Laban Musinguzi, **Jackson Efitre**, Konstantine Odongkara, Richard Ogutu-Ohwayo, Fredrick Muyodi, Vianny Natugonza, Mark Olokotum, Sharon Namboowa, Shamim

Naigaga (2015) Fishers' perceptions of climate change impacts on their livelihoods and adaptation strategies in environmental change hotspots: a case of Lake Wamala, Uganda, *Environment, Development and Sustainability*, 17(4).DOI 10.1007/s10668-015-9690-6

6. Mulongaibalu Mbalassa, Muderhwa Nshombo, Mujugu Eliezer Kateyo, Lauren Chapman, **Jackson Efitre** and Gladys Bwanika (2015) Identification of migratory and spawning habitats of *Clarias gariepinus* (Burchell, 1822) in Lake Edward - Ishasha River watershed, Albertine Rift Valley, East Africa. *International Journal of Fisheries and Aquatic Studies*, 2(3): 128-138.

7. Saulnier-Talbot E', Gregory-Eaves I, Simpson KG, **Efitre J**, Nowlan TE, et al. (2014) Small Changes in Climate Can Profoundly Alter the Dynamics and Ecosystem Services of Tropical Crater Lakes. *PLoS ONE* 9(1): e86561. doi:10.1371/journal.pone.0086561.

8. Nakiyende H., Mbabazi D., Taabu-Munyaho A., Baasa H., Muhumuza E., & **Efitre J.** (2013) The decline of *Alestes baremose* (Boulenger, 1901) and *Hydrocynus forskhalii* (Cuvier, 1819) stocks in Lake Albert: Implications for sustainable management of their fisheries. *Uganda Journal of Agricultural Sciences*, 14(2):125-140: ISSN 1026-0919.

9. **Efitre, J.**, Bugenyi, F., Mbabazi, D., Kubiriza, G.K., Muyodi, F.J. and Bwanika, G. (2010). Fish Biodiversity. In: Baseline Report on State of Biodiversity in the Nile Uganda 2010, Edited by J.B. Kaddu and H. Busulwa. A production of the Wetlands and Biodiversity Conservation Component of the Nile Transboundary Environment Action Project. Nile Basin Initiative Secretariat, pp. 103-108. ISBN: 978-9970-148-29-5.

10. **Efitre J.**, & Chapman L.J., Murie D.J. (2009) Fish condition in introduced tilapias of Ugandan crater lakes in relation to fishing pressure and deforestation, *Environmental Biology of Fishes*, 85(1): 63-75.

### **Research Interests and grants:**

My research focuses on examining the effect of human activities such as deforestation, over-fishing, climate variability and change on the fisheries resources in freshwater ecosystems and on the development of sustainable management strategies for these resources through co-management with local communities.

I have over 18 years of research and project management experience where I have actively collaborated with many national, regional and international institutions and organizations in fisheries, climate change and capacity building in environmental conservation.

I was a Co-PI responsible for the capacity building component of the National Fisheries Resources Research Institute (NaFIRRI) and Makerere University collaborative project aimed at networking scientists and communities, reviewing fisheries training curriculum; collecting time series climate data and relating it to changes in riparian ecosystems, physico-chemical

parameters, lake productivity, composition and life history of fishes; determining socioeconomic impacts and analyzing livelihoods; reviewing policies, regulations and governance systems; packaging and sharing information to increase awareness on climate change; mainstreaming climate change into Fisheries and Aquaculture the curricula; development of a curriculum and training manual for climate change and fisheries used to train students in tertiary institutions.

Currently, I am a Co-I/Member of the Coordination Team for Climate Research for Development in Africa (CR4D), an African-led joint initiative by the African Climate Policy Center (ACPC), World Meteorological Organization (WMO), African Ministerial Conference on Meteorology (AMCOMET), and Global Framework for Climate Services (GFCS). The overarching mission of CR4D is to promote user-driven and user-inspired climate research that enhances co-designing and co-production of climate information and services for policy and decision making in key socio-economic and livelihood sectors.

I am also a Co-Investigator on the FCFA collaborative research consortium for East Africa focusing on “Integrating Hydroclimate Science into Policy Decisions for Climate-Resilient Infrastructure and Livelihoods in East Africa (HyCRISTAL)” that addresses, among others, incorporation of climate change knowledge and information to enhance resilience of the riparian communities around Lake Victoria Basin, East Africa. HyCRISTAL is funded by the UK Department for International Development (DfID) and the UK Natural Environment Research Council (NERC).

Between June – July 2017, I was a **Rockefeller Foundation Academic Writing Fellow** working on a project titled “Integrating Climate Science into Strategies for Climate-Smart Fisheries and Livelihoods (CSFL)”.

Since February 2018, I have been appointed to serve as **Lead Author** of Chapter 9: Africa, in Working Groups II of the 6<sup>th</sup> Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).

I have:

- Collaborated with scientists in the UK, USA, Canada, Belgium, East Africa and Uganda;
- Experience in fisheries and aquatic sciences data collection, statistical analysis and report writing;

- Undertaken more than 15 consultancies in fisheries, hydropower development, Oil and Gas environmental impact assessments on aquatic ecosystems and biodiversity, climate change impacts and adaptation; curriculum review and development, and capacity building.
- Co-developed, participated and coordinated at least 3 internationally funded research and capacity building projects;
- Attended and presented papers in at least 14 international conferences including a poster on **“Mainstreaming climate change into fisheries and aquatic sciences curriculum and training in tertiary academic institutions”** which received the best presentation award from the World Climate Change Research Programme (WCRP) during the Africa climate change Conference in Arusha, Tanzania, 2013.
- Been a member of the Editorial Advisory Board of the International Journal of Climate Change Strategies and Management.
- **Member, Ad-hoc Experts Group** for development of annexes to the African Charter on Maritime Security and Safety and Development in Africa.  
Member of fisheries and environmental conservation societies: Africa Adapt, GISFish.

### **Selected Research Projects**

- Integrating Hydroclimate Science into Policy Decisions for Climate-Resilient Infrastructure and Livelihoods in East Africa (HyCRISTAL) funded by the UK Department for International Development (DFID) and the UK Natural Environment Research Council (NERC) **(Co-Investigator) (2015-2018)**
- Equipping small scale fishers and riparian communities with adaptation strategies to cope with impacts of climate variability and change, National Fisheries Resources Research Institute (NaFIRRI)/Makerere University collaborative project funded by Rockefeller Foundation **(Co-Investigator) (2012 -2015)**
- Lake Victoria Environment Management Project (LVEMP II) Capacity Building Component at the Department of Biological Sciences, Makerere University **(Member Technical Committee) (2012-2015)**
- Developing Research Capacity among African Environmental Scientists- EU-ACP Science and Technology Programme collaborative research grant between the Tropical Biology Association (TBA) and four African countries (Uganda, Kenya, Ghana and Nigeria) **(In-country coordinator/Lead Scientist) (2010 -2012)**

### **Community outreach involvement:**

I have demonstrated experience of working with multidisciplinary teams in a professional and flexible manner including international donor organizations, civil society, public and private sector and local communities in multi-cultural, religious, racial and gender settings acquired during implementation of biodiversity, climate change, fisheries and aquaculture and capacity building projects.