



## Forty-five years at Kunduchi as a student, resident, instructor, and laboratory scientist

**Dr. Albogast T. Kamukuru**

Retired Chief Laboratory Scientist and Part-time Lecturer, SoAF

**M**y memories regarding Kunduchi Campus span for forty-five years (July 1978 – July 2023) in different phases including as a student in the Fisheries Diploma, B.Sc., M.Sc. and Ph.D. degree programmes. Moreover, I have been a resident and worked as an instructor at Kunduchi Campus engaging in teaching and supervising students in the undergraduate and graduate programmes. Though retired since 2015, my involvement with the School of Aquatic Sciences and Fisheries Technology (SoAF) of the University of Dar es Salaam (UDSM) has continued to date as a part-time instructor.

### Student in the Diploma in Fisheries programme

From July 1978 – July 1980, I attended a two-year Fisheries Diploma programme at Kunduchi Marine Fisheries Research and Training Institute (KMFRTI) under the Fisheries Division in the Ministry of Natural Resources and Tourism of the United Republic of Tanzania. This programme exposed me to a full package of fisheries aspects offered in five academic departments namely, Fisheries Biology, Food Technology, Marine Engineering, Nautical Sciences and Fisheries Management and Extension. Besides the taught theoretical and practical classes at KMFRTI, I had an opportunity to attend practical trainings and excursions at various places within the country including a three-month freshwater fisheries studies exchange programme at Nyegezi Freshwater Fisheries Institute. Such kinds of diversity exposure was of an immense value to fisheries aspects. For the planned revival of the Fisheries Diploma Course, the former programme offered by KMFRTI, should be the basis of the new programme.

### Undergraduate student

From July 1982 – March 1985, I attended a B.Sc. Degree (General) majoring in Zoology and Marine Biology subjects in the Department of Zoology and Marine Biology of the UDSM. Under this programme fisheries aspects received an insignificant contribution. However, aquatic science practical classes relevant to

fisheries were conducted at the Kunduchi Marine Biology Station (KMBS) of the UDSM. This programme also gave me another opportunity of visiting KMBS regularly.

### MSc student

From October 1989 – February 1992, I attended a M.Sc. Degree programme by coursework and dissertation in the Department of Applied Zoology of the University of Kuopio, Finland. During my studies, the fieldwork of the dissertation titled “Costs and earnings of basket trap and handline fishery in the Dar es Salaam Region, Tanzania” was carried out in Dar es Salaam while based at KMFRTI between May 1991 and August 1991 from which, I received the logistical support.

### PhD student

From July 1999 – November 2003, I attended a Ph.D. Degree programme by thesis in the Department of Zoology and Wildlife Conservation of the UDSM. During my Ph.D. thesis research titled “Effects of fishing on growth and reproduction of the blackspot snapper, *Lutjanus fulviflamma* (Pisces: Lutjanidae) in shallow waters of Mafia Island, Tanzania”, laboratory analysis of fish samples was conducted at KMBS of the UDSM.

### Resident and UDSM staff

During my time residing, working and studying at Kunduchi Campus, I have witnessed major changes that are highlighted below:

*Emergence of institutions:* Four public institutions namely, KMFRTI, KMBS, Kunduchi Beach Hotel and Kunduchi Ruins Antiquity existed at Kunduchi area by 1978 with the former having a lion's share of the land and seafront area. To date, six new institutions have emerged namely, Tanzania Fisheries Research Institute - TAFIRI (both the Headquarters and Dar es Salaam Centre), the African Minerals and Geosciences Centre (formerly known as SADC Mineral Centre), Kunduchi Islamic Girls Secondary School, Kunduchi Police

## Forty-five years at Kunduchi Campus as a student, resident, instructor, and laboratory scientist

Station, Kunduchi Wet-in-Wild Water Park and of recent, the National Mariculture Resource Centre (NMRC) of the Ministry of Livestock and Fisheries.

*Beach erosion:* Beach erosion changed the shoreline at Kunduchi area with the significant loss of some beach structures. Notably, the radio-call house of KMFRTI that was formerly located at 60 m from the shoreline was less than a meter by 1995.



Radio-call house of KMFRTI as it appeared being threatened by the beach erosion in December 1995. ©Albogast T. Kamukuru

The seawater pumping station and a watchtower of the Kunduchi Marine Biology Station that were formerly land-based had been decreased by 6 m from the shoreline by December 1995.



Seawater pumping station and a watchtower of the Kunduchi Marine Biology Station as they appeared being threatened by the beach erosion in December 1995 and current situation (the insert). ©Albogast T. Kamukuru

Other observations were the seawater that flooded into the nautical science building of KMFRTI, the current administration building of SoAF and the swimming pool of Kunduchi Beach Hotel in 1995. Seawater intrusion was a red flag to take action by our neighbours particularly, Kunduchi Beach Hotel, former Africana Hotel, Silversands Hotel and Bahari Beach Hotel. They installed groynes for protecting their properties in January 1996.



Land reclamation using stones at Kunduchi Beach Hotel in January 1996. ©Albogast T. Kamukuru

*Fisheries supporting infrastructure:* KMFRTI was endowed with infrastructure that supported fishing activities including flake ice making machine, cold room, fish canning machine, small to medium-sized fishing boats, fish smoking kilns, fishing gear of various categories (ringnets, sharknets, gillnets, beach seines, hook and line and fish traps) and boat and engine repair facilities. The entire setup exposed students to fisheries practical oriented aspects.

*Kunduchi fish landing site:* The public fish landing site was relocated to the beach at KMFRTI between the nautical science and Block A residential buildings in 1987/1988. The fish landing site immediately attracted a lot of stakeholders (fishers, fish traders/mongers/processors, pet-business and the like). The impact of beach trampling led to the disappearance of *Ipomoea pes-caprae*, a famous beach creeping plant that formed tangled mats to hold tight sand particles. Consequently, the resulting loose sand particles over the entire area of KMFRTI and KMBS together with increased intensity of dynamite fishing activities within the vicinity were considered to have contributed to severe beach erosion observed in mid-1990s.

Today the Kunduchi fish landing site has been relocated to Kunduchi Pwani village. Moreover, the blasts from dynamite fishing are no longer frequently heard at Kunduchi area. Consequently, the positive changes at the Kunduchi Campus include the retreat of shoreline to its previous 1978 mark and the entire beach area is densely covered by *Ipomoea pes-caprae* ■