A summary of the online meeting held on Feb 14, 2023

Our first meeting was successfully done: participants actively exchanged their ideas. Approximately 20 people joined this meeting. The followings are some of topics covered during the meeting.

Integration of remote sensing techniques to in-situ monitoring

Drs. Makwinja and Obubu emphasized in their presentations the necessity of incorporation of remote sensing techniques into water quality monitoring programs in African nations. Benefits of using remote sensing include giving a synoptic view of the entire water body as well as detecting sporadic events such as algal blooms, which are very difficult tasks with in-situ monitoring alone. In addition, Dr. Makwinja explained his institutional capacity to host large-scale research projects. Dr. Obubu introduced the well-equipped national laboratory along with recent procurement of advanced monitoring machinery. With regards to the world's well-known lakes, namely Lakes Malawi and Victoria, the directors of Senga Bay Fisheries Research Center under Ministry of Forestry and Natural Resources, Fisheries, Malawi, and Department of Water Quality Management under Ministry of Water and Environment, Uganda, both provided comments on trans-boundary water resource management issues, for which coordinated efforts towards pollution control by neighboring countries are required. They also acknowledged that remote sensing could be effectively utilized to tackle those issues.

Creation of a task group and application for a research fund

Dr. Inagaki proposed the creation of a task group within our network consisting of researchers with different expertise. Our research field is currently somewhat divided into science and engineering sides; hence, two units dedicated for water quality monitoring and treatment technology development can be set inside the group. He also showed aspiration to apply for a large-scale research fund in the future such as SATREPS, short for Science and Technology Research Partnership for Sustainable Development (see https://www.jst.go.jp/global/english/). For that application, consolidation of our members' expertise into one project is necessary. Prof. Sakakibara commented on a specific condition of SATREPS that a project must include aspects on linkage to the society (for example, collaboration with industrial sectors). In this regard, Dr. Jande from Nelson-Mandela Africa Institution of Science and Technology and Dr. Chepchirchir from Moi University have made efforts to market products and services extended from research activities in collaboration with Japanese companies. Their experiences would be very beneficial when the proposal is framed. Dr. Makwinja noted that obtaining a research fund is not very difficult, if we properly present our capability and the impacts of research on the community, society and policy making in a proposal, as funding agencies look for a team like ours. How our group effectively move things forward is still under discussion; however, workable plans will be presented soon.

A discussion topic for the next meeting

An important question was posed to all of participants by Prof. Sakakibara: What is the trend, or future prediction regarding how to deal with wastewater treatment in Africa? We will have a time for discussions about this topic at the next meeting. Each of us is encouraged to think of this question in advance.

Regular online meeting

We agreed to have a bimonthly meeting to share knowledge and experiences that members of our group have. At the next meeting in the middle of April, three presentations are scheduled (titles are tentative):
(i) Fundamentals of remote sensing by Dr. Tatsuyuki Sagawa
(ii) Regional efforts for tackling water-related issues including cyanobacteria algal bloom and prevalence of antibiotic resistance bacteria by Dr. Rose Chepchirchir
(iii) A bio-AOP process to treat antibiotics by Ms. Shen Tong