2020 International Conference on the Nile and Grand Ethiopian Renaissance Dam: Science, Conflict Resolution and Cooperation, August 20-21, 2020, Florida International University, Miami, FL USA (Virtual)

Water Hyacinth Management Experiences and Lessons for Lake Tana

Yirgalem Assegid[1]

Abstract

Lake Tana is under pressure due to water hyacinth (Eichhornia crassipes) encroachment that has affected all economic activities of fishery, navigation, tourism etc... Economic and ecological disruption is witnessed from the 40% reduction of boat transits for some part of the year, low number of tourists making visits to monasteries, and a halting of fishery on the lake periphery. The encroachment of water hyacinth has caused physical blocking of travel by boats, and higher eutrophication on fish breeding places. The problem is exacerbated with increased sedimentation into the lake from upper catchments and intensification of agriculture on water receding lake area that has fuelled nutrient supply and propagation of water hyacinth. It is imperative to realize that failure to manage water hyacinth on lake Tana would only make GERD a replication of the failure whereas success on lake Tana could make GERD a replica of success due to the hydrological connection and rapid transfer of the problems. Misguided approaches on lake Tana is evident from the increased deterioration and ecological disruption of the Lake. This study focuses on outlining road maps to manage water hyacinth and restore the lake in a rapid fashion. The study accounts the practical experiences of water hyacinth management from South Florida Water Management District (SFWMD) and shares strategic approaches, adaptable technologies, and practices. The approach investigates the physical, biological, chemical, and nutrient controls on water hyacinth that are proven to have zero effect on fishery and other biota of the lake. It is indicated that mechanical harvesters and choppers could be used only to open alleys for access by boats and airboats. Whereas contact killer chemicals such as Diquat that are recommended by the EPA, and tested for several decades, could be applied on the vast expanse of the area covered by the water hyacinth. Application of weevils could be done on the upstream water currents of the lake for downstream propagation. Water hyacinth control by weevils is a slow process and should target areas that are less of a priority for any economic activity and will have less effect on the economic and ecological performance. Last, the study outlines entry points of Federal and Regional governments, research and training institutions, lake management bureau, environmental protection agencies, local administrative groups, monasteries, and the private sector to combat progression of the water hyacinth**.**

Keywords: Lake Tana, Water Hyacinth, Sedimentation, Aquatic weed control, GERD

[1]South Florida Water Management District, yirgalem9@gmail.com