WEST AFRICAN JOURNAL OF APPLIED ECOLOGY, 2010, vol. 16, 51 - 63 ASSESSMENT OF THE FISH AND FISHERY RESOURCES OF THE KPONG HEADPOND

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Abstract

This study was conducted to determine the state of the fish and fishery resources of the Kpong Headpond twenty five years after impoundment. Data were obtained from monthly fish sampling using sets of monofilament and multifilament gill nets of various laterally stretched mesh sizes ranging between 12.5 and 114.3 mm. A total of forty three species of fin fish representing 30 genera and 17 families were recorded. The most important families and species in terms of weight and abundance were *Claroteidae* (mainly *Chrysichthys nigrodigitatus*), *Cichlidae* (mainly Hemichromis bimaculatus, Hemichromis fasciatus, Sarotherodon galileus and Tilapia guineensis) Mormyridae (mainly Hyperopisus bebe and Mormyrus deliciosus), Cyprinidae (mainly Barbus macrops), Schilbeidae (mainly Schilbe intermedius) and Characidae (mainly Brycinus leuciscus). Benthic and semi pelagic omnivores constituted the most important trophic groups together accounting for 72% and 65.5% of pooled weight and numbers respectively. Fish diversity did not change with seasons. CPUE was higher in terms of weight and numbers in the wet season than in the dry season. The estimated potential yield of 259.08 t yr⁻¹ was lower than pre-impoundment estimates due to lower mean conductivity recorded in this study as well as possible high flushing rates through the reservoir. The dominant fishes of commercial importance were Chrysichthys spp and Cichlid spp. The most common fishing gears used by fishermen were gill nets of mesh sizes 63.5mm, 69.85 mm and 47.625 mm. The following recommendations are made to sustain the fish and fisheries: education of fishers on effects of bad fishing practices and the need to conserve fish and fishery resources; monitoring, control, surveillance and enforcement of fishing regulations; integrated water resources management; and continued monitoring of fish and fishery resources.