

## **Stock assessment and management implications of inland fishery in the floodplain of the Cross River, Nigeria**

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### **Abstract**

Fishery assessment was conducted monthly between January, 2004 and December, 2006 in 3 zones of inland wetlands of Cross River, Nigeria. Zone I was upper Cross River (savanna wetlands), Zone II: middle Cross River (savanna/forest wetlands) and Zone III was the lower Cross River (forest wetlands)]. Forty six fish species belonging to 28 genera and 16 families were observed. These included; Bagridae (25.7%), Cichlidae (16.9%), Clariidae (11.5%) Clupeidae (10.2%), Mochokidae (8.7%), Mormyridae (5.8%), Cyprinidae (2.9%), Osteoglossidae (2.8%), Protopteridae (2.6%), Denticeptidae (2.4%), Hepsetidae (2.4%), Distichodontidae (2.3%), Malapteruridae (2.2%), Polypteriidae (2.2%), Schilbeidae (2.0%) and Characidae (2.0%). 2768 artisanal fishermen consisting of 500 (Zone I), 887 (Zone II) and 1381 (Zone III) were enumerated. Four hundred and seventeen were found to be full-time fishermen, 893 part-time, 969 shoreline and 489 assistants. Common gears were hook and line constituting 30%, cast net (20.1%) bailing method (15%), gill nets (13.3%), seine net (11%) Traps (10.5%), lift net (6.7%) Dip nets (5%), poisoning (4.8%), cutlass (3.3%) and spear (1%). Four hundred and forty two operational boats were encountered. Significant differences were observed in the percentage of operational boats between the three zones ( $F = 5.67$ ;  $P < 0.05$ ) (Zone I: 19%, Zone II: 31% and Zone III: 50%) and the average catch per boat in the different zones ( $F = 7.84$ ;  $P < 0.05$ ) (Zone I: 31.9kg, Zone II: 64.8kg and Zone III: 106.3kg), with highest production occurring in Zone III and lowest in Zone I. Estimated catch per annum was 14,670MT. The study shows that there was no sustainable management practice in place. There were high incidences of bad fishing methods. Community based management system that establishes participatory involvement of fishermen in the conservation and rational exploitation of fisheries resources was therefore recommended.