**Mormyridae settlement on the Niger River: Diversity, Structure and Exploitation in the Niamey area (Niger Republic)**

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To determine the characterization, exploitation, and community structure of Mormyridae populations in the Niamey fisheries on the Niger river, a study was conducted from August to November 2022. Fish data were collected twice (2) a month on artisanal fishing landings. The inventory yielded 15 species divided into 9 genera. Four types of fishing gear are used to catch fish in Niamey: gillnets, sparrowhawk net, baited trap and baited longlines. All the gear used by fishermen is destructive, as its mesh size does not spare small individuals. The proportions of catches show that 42.22%, 40.89, 17% and 15.32% of individuals caught with gillnets, sparrowhawk net, baited trap and baited longlines respectively were smaller than the average size in terms of Lt (20.69±8.38 cm). Analysis of the size structure of the fish measured shows a predominance (53.32%) of small-sized individuals (juveniles) (6.7-21.64 cm). This study reveals a very severe exploitation of fish stocks, with strong fishing pressure on juveniles, which limits stock renewal potential and has negative impacts on the productivity of Niamey's fisheries. A comparison of the optimum size (37.43 cm) and the first-capture size (L50 = 18.74 cm) of the abundant species confirms this situation. Natural mortality is higher than fishing mortality in *Mormyrus rume*. This means that the population is under-exploited. These results are essential for rational management of the fish stock.

Keywords: Niger River, Diversity, Characterization, Exploitation, Structure, Mormyridae.