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Small Indigenous Fish Species of Lumbini Province, Nepal

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Small Indigenous Fish species (SIS) are those fishes which can grow up to a maximum size of 25 cm or 9 inches in their mature or adult stage of life cycle. The study was conducted in three rivers (Dano, Banganga and Arungkhola) and two lakes (Jagadishpur Reservoir and Gajedi lake) of Lumbini Province from 2018 to 2019 to access the diversity and environmental parameters. Nineteen sampling stations were selected three each from rivers and five from each lake. Fishes was collected seasonally by using cast net and local fishing gears within 200 meters at each sampling station by the help of local fishermen. Physico chemical parametrs; temperature, pH, velocity, transparency, dissolved oxygen, free CO₂, alkalinity and hardness were also analyzed from each site.

A total of 52 species representing 7 orders, 17 families and 34 genera were recorded. Twenty-eight specie were collected from Dano river, in Banganga River 14 species, ArungKhola 20 species, Jagadishpur reservoir 34 species and Gajedi lake 32 species. Species diversity was found more in lakes in comparable with rivers as lotic water system have ample source of food and favorable environment. Order Cypriniformes and family Cyprinidae (n=23) was the dominant order and family in all study areas followed by Bargidae (n= 4), Mastacembelidae (n=4), Nemachelidae (n=3), Ambassidae (n=2), Channidae (n=2), Osphronemidae (n=2) and Sisoridae (n=2).

The species dominance was varied according to locality; Rivers were dominated by Garra, Barilius and Barb species whereas the lakes were dominated by Amblypharyngodon, Esomus and Barbs. In Rivers. The water quality found within the desirable range in all study areas indicated the areas are good habitat for fishes as well as aquatic fauna.

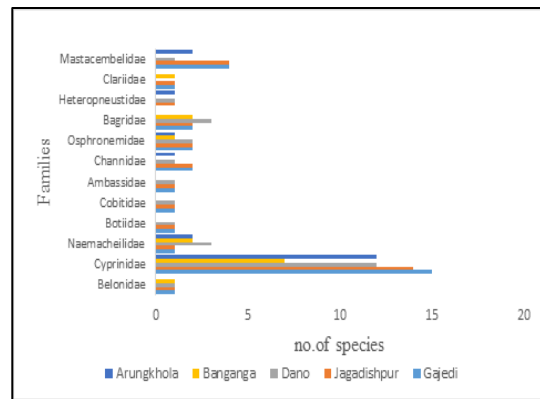


Figure 1. Order wise Distribution of SIFS in Lakes and Rivers of Lumbini Province.

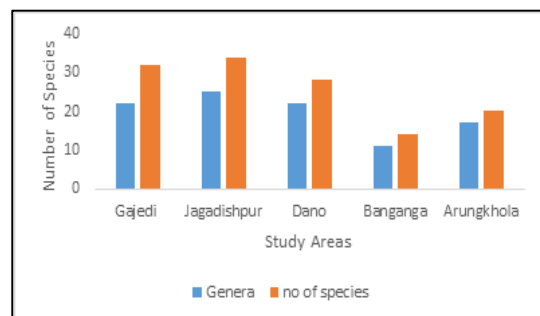


Figure 2. Species Distribution of SIFS in Lakes and Rivers of Lumbini Province.