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Assessment of District Inland and Aquaculture Fish Production and Productivity Referring to Major Climatic Zones in Sri Lanka

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There is a high number of rivers and reservoirs with a total inland water area of 290,500 ha in Sri Lanka, which is having the highest water bodies: land ratio in the world. However, contribution of the inland fisheries sector for Sri Lankan GDP (0.2%) is insignificant. Per capita consumption of freshwater fish and fresh water dried fish were increased during the last few decades in Sri Lanka with insufficient availability to satisfy the demand. Also, inland fish productivity in Sri Lanka was significantly low (302 kg/ha) compare to other countries e.g. Bangladesh (>1500kg/ha). Also, Sri Lanka imports around 84,463 t of fish and fisheries products by spending around Rs.Mn. 32,726 annually. Therefore, this study explores the potential inland fish productivity of each district under different climate zones for better policy implications.The study follows a quantitative approach drawing secondary data from Ministry of Fisheries & Aquatic Resource Development during 2008-2018 periods by considering both aquacultures/culture based & inland fish production and related inland water areas in each district.The highest annual inland fish production and productivity of dry zone were recorded in Anuradhapura (12,656 t) and Hambantota (460.57 kg/ha) respectively, while the lowest production (86 t) and productivity (8.95 kg/ha) were recorded in Jaffna. The highest annual wet zone inland fish production (2435 t) and productivity (624.48kg/ha) was from Rathnapura while the lowest was from Kegalle district as (20 t production and 25 kg/ha productivity). Further, the highest annual inland fish production (4038 t) and the lowest productivity (210.32 kg/ha) of intermediate zone were recorded in Kurunagala while the lowest production (1074 t) and the highest productivity (315.77 kg/ha) were recorded in Badulla. Accordingly, Sri Lanka can attain more than 181,408 t of possible inland fish yield under the current situation. It revealed that Sri Lankan does not attain its optimum productivity and there were huge fish productivity differences in each district in the same climatic zones. Therefore, rational policies and management of the water bodies with fish productivity mapping, co-management strategies, stock enhancement and fish seed production should be adapted to stop capital flight.

Keywords: Climatic zone, District, Fresh fish, Inland water, Productivity