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ARTICLE

GROWTH TRENDS AND FORECASTING OF HILSA (TENUALOSA ILISHA) LANDING AT FARAKKA, GODHAKHALI, AND DIAMOND HARBOUR IN RIVER GANGA, INDIA: INSIGHTS USING AUTO-REGRESSIVE INTEGRATED MOVING AVERAGE (ARIMA) MODEL

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The study modelled and forecasted Hilsa fish landings at Farakka, Godhakhali, and Diamond Harbour in the river Ganga using the Auto-regressive Integrated Moving Average (ARIMA) model. Catch from 2019 to 2023 revealed ARIMA (4,2,4) as the most suitable model, supported by the Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), Root Mean Square Error (RMSE), and R^2 (R-squared) values. Forecasts for 2024 and 2025 predicted slight declines in landings, from 46.36 to 45.29 tons. However, catch landing data are projected to increase by 14.7% in 2024 and 12.05% in 2025 compared to the average landing data from 2019 to 2023.

Keywords: Hilsa, Fish landing, Growth trends, Forecast, ARIMA