ABSTRAK

Malik, Riani Fitri Ibnul. 2023. *Prediksi Hasil Tangkap Ikan Laut Di Kota Tanjungpinang Menggunakan Metode SARIMA (Seasonal Autoregressive Integrated Moving Average).* Skripsi. Tanjungpinang: Jurusan Teknik informatika, Fakultas Teknik dan Teknologi Kemaritiman, Univeristas Maritim Raja Ali Haji. Pembimbing I: Martaleli Bettiza, S.Si., M.Sc. Pembimbing II: Nurfalinda, S.T., M.Cs.

Kota Tanjungpinang merupakan ibu kota provinsi Kepulauan Riau yang mempunyai wilayah perairan luas dan potensi hasil laut yang kaya. Kota Tanjungpinang merupakan ibu kota. Melihat potensi tersebut, daerah tersebut merupakan peluang investasi di sektor perikanan dan kelautan, sebagaimana dijelaskan dalam pasal 9 Perda No 23 Tahun 2014. Dari hasil wawancara yang peneliti lakukan, Dinas Kelautan dan Perikanan juga melakukan ekspor ikan ke luar negeri sehingga jika data produksi hasil tangkap ikan laut mengalami penurunan, strategi pemerintah untuk tahun depan mengatur anggaran lebih banyak ke bantuan alat tangkap ikan nelayan tetapi jika data produksi hasil tangkap ikan laut mengalami peningkatan maka anggaran lebih banyak ke sosialiasi tentang penangkapan ikan tanpa merusak ekosistem laut , maka dari itu prediksi hasil produksi tangkap ikan ini bisa membantu pemerintah untuk mengestimasi anggaran kegiatan mereka . Berdasarkan data penangkapan ikan yang tidak pasti, angka konsumsi ikan pertahun semakin tinggi, dan adanya permintaan ekspor ikan ke luar negeri, perlu adanya prediksi kedepannya untuk mengetahui ketersediaan ikan hasil tangkapan bulan berikutnya. Penelitian ini bertujuan agar mengetahui tingkat akurasi metode ini dan mendapatkan model terbaik dari metode SARIMA (*Seasonal Autoregressive Integrated Moving Average*) dalam Prediksi Hasil Tangkap Ikan di Kota Tanjungpinang dan menghasilkan model terbaik yaitu $(0,2,1)(1,2,0)^2$ dari model tersebut diperoleh prediksi tangkap ikan laut 12 periode kedepan dengan MAPE sebesar 10% yang termasuk kategori sangat baik.

Kata kunci: *SARIMA, tangkap ikan, MAPE*

ABSTRACT

Malik, Riani Fitri Ibnul. 2023. *Prediction of Sea Fish Capture Results in Tanjungpinang City Using the SARIMA Method (Seasonal Autoregressive Integrated Moving Average).*Thesis. Tanjungpinang: Department of Computer, Engineering, Faculty of Engineering and Maritime Technology, University of Maritim Raja Ali Haji. Advisor: Martaleli Bettiza, S.Si., M.Sc. Co-advisor: Nurfalinda, S.T., M.Cs.

Tanjungpinang City serves as the provincial capital of the Riau Islands, boasting a vast maritime area and abundant marine resources. The city's significant potential has positioned it as an attractive investment opportunity within the fisheries and maritime sectors, as stated in Article 9 of Regional Regulation No. 23 of 2014. Moreover, Tanjungpinang City acts as the hub for the aforementioned province.

Appreciating the aforementioned potential, the local authorities have recognized the importance of strategically investing in the fisheries and maritime sectors. To this end, the Department of Maritime Affairs and Fisheries has been actively involved in exporting fish to international markets. Consequently, if there is a decline in the production of sea fish, the government's approach for the upcoming fiscal year would entail allocating a larger portion of the budget towards assisting fishermen by providing them with adequate fishing equipment. Conversely, if there is an increase in the production of sea fish, a greater allocation of funds would be dedicated to raising awareness about sustainable fishing practices that do not harm the marine ecosystem. Thus, accurate predictions of fish catch production are instrumental in facilitating the government's estimation of budgetary requirements. Due to the inherent uncertainty surrounding fish catch data, the yearly consumption of fish is consistently rising, and there exists a demand for fish exports to foreign markets. Therefore, it becomes imperative to employ future-oriented predictions to determine the availability of fish catch in the subsequent months. The objective of this research is to assess the accuracy of the SARIMA (Seasonal Autoregressive Integrated Moving Average) method and ascertain the optimal model for predicting fish catch results in Tanjungpinang City. The research yielded the most suitable model, denoted as $(0,2,1)(1,2,0)2$. Using this model, predictions were generated for fish catch over the next 12 periods, exhibiting a Mean Absolute Percentage Error (MAPE) of 10%, which falls within the "Very good" category.

Keywords: *SARIMA, Fish Capture Results,MAPE*