

UNIVERSITI TEKNOLOGI MARA

**Structure Design and Analysis of Small-
Scale Multi-Purpose Terengganu
Fishing Boat**

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ABSTRACT

The fishing industry in Terengganu, Malaysia, is central to the region's economy and cultural heritage. Small-scale fishing boats are crucial for local fishermen but evolving needs demand versatile and efficient vessels. This project focuses on the structural design and analysis of a small-scale multi-purpose Terengganu fishing boat, addressing the challenge of optimizing hull thickness and framing system dimensions. The methodology includes data collection, literature review, hull design using POLYCAD software, general arrangement, weight estimation, structure and framing system design, and strength analysis. The expected results include a comprehensive analysis of the ship's weight, buoyancy force, load distribution, shear force, bending moment, and factor of safety, ensuring the vessel's stability and compliance with safety standards. The project aims to deliver a robust structural design that enhances operational efficiency and sustainability, revitalizing the local fishing industry and improving fishermen's livelihoods in Terengganu.

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