

ANALISIS EKONOMIS KAPAL NELAYAN BERBAHAN FIBERGLASS DAN PLASTIK (HDPE) MENGUNAKAN METODE NET PRESENT VALUE (NPV)

NAMA : YENI ELIA
NIM : 1304221096
DOSEN PEMBIMBING : Dr. Jamal, S.T., M.T

ABSTRAK

Penelitian ini membahas perbandingan kelayakan investasi antara dua jenis material kapal nelayan, yaitu *fiberglass* dan *High Density Polyethylene* (HDPE). Kapal berbahan fiberglass merupakan material konvensional yang telah lama digunakan nelayan karena harganya terjangkau dan mudah diproduksi, namun memiliki kelemahan berupa kerentanan terhadap retak, benturan, serta membutuhkan biaya perawatan yang cukup tinggi selama masa pemakaian. Sebagai alternatif, material HDPE mulai diperkenalkan karena memiliki keunggulan tahan korosi, tahan terhadap benturan, tidak memerlukan pengecatan ulang, dan umur pakai yang lebih panjang, meskipun biaya investasi awalnya lebih besar dibandingkan *fiberglass*. Untuk mengetahui material mana yang lebih menguntungkan secara ekonomi, penelitian ini menggunakan metode *Net Present Value* (NPV), yaitu suatu metode analisis kelayakan investasi yang menghitung selisih antara nilai sekarang dari seluruh pendapatan (arus kas masuk) dengan nilai sekarang dari seluruh biaya (arus kas keluar) selama umur ekonomis kapal, dengan memperhitungkan faktor nilai waktu uang (*time value of money*). Suatu investasi dinyatakan layak apabila nilai NPV yang dihasilkan bernilai positif. Melalui pendekatan ini, penelitian bertujuan untuk membandingkan biaya investasi awal, biaya operasional, dan biaya perawatan antara kapal *fiberglass* dan HDPE, sehingga dapat ditentukan jenis material kapal yang memberikan tingkat keuntungan ekonomi terbaik bagi nelayan selama masa penggunaan kapal, sekaligus menjadi bahan pertimbangan dalam pengambilan keputusan investasi kapal nelayan yang lebih efisien dan berkelanjutan.

Kata kunci: kapal penangkap ikan, *fiberglass*, HDPE, *Net Present Value*, analisis ekonomis

ECONOMIC ANALYSIS OF FIBERGLASS AND HIGH-DENSITY POLYETHYLENE (HDPE) FISHING VESSELS USING THE NET PRESENT VALUE (NPV) METHOD

AUTHOR NAME : YENI ELIA
ID NUMBER : 1304221096
SUPERVISOR : Dr. Jamal, S.T., M.T

ABSTRACT

This study examines the investment feasibility comparison between two types of fishing boat materials, namely fiberglass and High Density Polyethylene (HDPE). Fiberglass is a conventional material that has long been used by fishermen because of its affordable price and ease of production, but it has weaknesses such as susceptibility to cracking, impact damage, and relatively high maintenance costs during its service life. As an alternative, HDPE material has been introduced because of its advantages, including corrosion resistance, impact resistance, no need for repainting, and a longer service life, although its initial investment cost is higher than that of fiberglass. To determine which material is more economically advantageous, this study applies the Net Present Value (NPV) method, an investment feasibility analysis technique that calculates the difference between the present value of total revenue (cash inflows) and the present value of total costs (cash outflows) over the boat's economic life, taking into account the time value of money. An investment is considered feasible if the resulting NPV is positive. Through this approach, the study aims to compare the initial investment costs, operational costs, and maintenance costs of fiberglass and HDPE boats, in order to determine which material provides the best economic benefit for fishermen throughout the boat's service period, while also serving as a consideration in making more efficient and sustainable investment decisions for fishing boats.

Keywords: *fishing boat, fiberglass, HDPE, Net Present Value, economic analysis*