



The alternative livelihood development strategy in order to improve local fishermen revenue in the border region of Indonesia and Timor Leste

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Abstract. The impact of climate change is causing obstacles for fishermen because of the increasing risk of fishing, changing seasons and fishing locations, uncertainty of the wind season, thus affecting the number of catches. Climate change conditions that disrupt marine ecosystems certainly can worsen the economic life of fishermen households. The decrease in fish catch will have implications on household income. Fishermen in Belu have dependence on fishery sector especially capture fishery. Local fishermen need a strategy to increase revenue through alternative livelihoods to adapt to erratic fishing season. One of the economic adaptation strategies that fishermen can do is adaptation of human resources in fishery households through economic activities outside the fishery. This research aims to determine the income of fishermen households, analyzed the contribution of alternative efforts to total household income and analyze the involvement of family members of fishermen and the time spent to perform alternative livelihoods in the border areas of Indonesia and Timor Leste. The research was conducted using survey method through interview and observation technique. The results suggest that alternative livelihoods should be developed as a form of adaptation fishing households in retained revenue caused by decreased income from the main livelihoods as fishermen due to climate change.

Key Words: development strategies, alternative livelihoods, fishermen revenue, border region, climate change.

Introduction. Indonesia is the largest archipelago in the world that lies between two continents, Asia and Australia that has millions of people living in coastal areas and utilizing coastal resources as a source of livelihood. The welfare of millions of coastal communities is determined by the existence and preservation of coastal ecosystems because it is very vulnerable to various threats, one of the serious threat of climate change as a result of global warming. Judging from its geographical location, the sea and coastal areas of Southeast Asian countries are estimated to be one of the world's most productive regions and play an important role for the economic development of every country in the region. However, rapid development and ignoring environmental sustainability have caused ecological disasters in coastal areas (Mulyadi 2005).

Belu Regency, as one of the the regencies in East Nusa Tenggara Province, has a nationally strategic value because it is a border district that still faces various complex problems. Data shows that Belu regency has a low human development index of 59.72 and the percentage of poor people reaches 14.58% (BPS 2017). Belu Regency's economy is still dominantly contributed by the agriculture, livestock, fisheries and forestry sectors, namely 24.70% of the total GRDP of Belu (BPS 2017). The fact shows that the high rate of poverty in rural areas is not only caused by scarcity of resources but also because the