

# Assimilative Capacity of Mangrove Conversion to Salt Pond Industry "A Case Study of Bipolo Village, District of Kupang, Indonesia".

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- **Abstract:** One coastline area abundant with over 600 ha of mangrove forest is Bipolo Village located on Kupang Bay in the District of Kupang, East Nusa Tenggara Province of Indonesia. Even though enacting the salt import substitution policy, by enhancing salt production through conversion of mangrove area into salt ponds in Bipolo Village is economically and strategically beneficial for the development of NTT, it should be implemented in the spirit of environmental protection to make sure that the policy follows sustainable development guidelines. This study used accidental sampling to collect information regarding the benefit produced by mangrove. At the same time, a purposive sampling has been used to collect information regarding the technical details of the salt industry. The estimation of the cost has been calculated by using a regression model between total cost (TC) as dependent variable and production unit (Q) as independent variable for a consecutive scale of business. At least there two regression models to estimate the cost including Cubical Regression Model and Quadratic regression Model. The results of this analysis show that the maximum land conversion of mangrove to salt pond is 10 ha, that will generate a maximum Marginal Net Private Benefit (MNPB) for commercial companies. As the existing conversion of mangrove land being about 2.64 Ha, the local government might allow the existing companies to convert another 7.36 ha of land to salt pond industry. However, if the government continues the policy of encouraging salt industry along the coastline of Bipolo the problem of externality should be considered. In doing this the maximum mangrove vegetation that can be converted to salt pond is 8.45 ha only, with total production of approximately 1539 ton per year.
- **Keywords:** Salt, Environmental Protection, Cubical Regression Model and Quadratic regression Model, MNPB