

# GHG Emission Reduction from Palm Oil Mill Effluent

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## ABSTRACT

The palm oil sector has given significant contribution to the government revenues. In year 2015 the production of palm oil reached 31 Million Ton, or 50% of world production of 62 Million Ton. Several studies argue that palm oil expansion can contribute to the production of Green House Gasses (GHG) emission, including from methane emissions from palm oil mill effluent (POME).

This research was aimed at developing a model of environment impact caused by palm oil industry to the production of methane emissions from POME by increasing population, Gross Domestic Product (GDP), and increasing of total area of oil palm plantation at five main provinces, namely Riau, North Sumatra, Central Kalimantan, South Sumatra and West Kalimantan. Some statistical analysis to derive estimated parameters for the model were obtained from Eviews Statistical Data Processing software. The data used to support this model was time series data taken from year 2000 to year 2015 and from various data sources including statistics and other scientific literatures.

Results of this research will include (1) Average POME production per year 2010-2015, (2) Average POME production in five provinces, (3) Predicted Model of POME Production, (4) POME production elasticity and (5) Policy intervention on GHG methane emission reduction and its economic benefits. The discussion of this research will also include experience of POME management in several other countries.

**Keywords:** *POME, population, GDP, palm oil plantation, predicted emission model from POME*