

Waste to Value Analysis of a Palm Oil Industry

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Abstract. Indonesia's palm oil production rose up to 56 million tons in 2023, reaching 54% of worldwide exports. This industry generates a wide range of working opportunities, wealth, and global development. Together with nurturing a large supply chain, from small farmers and large exploitations, through process and transportation, leading to the palm oil's sale, until its final use. As any sector using industrial processes, particularly being an agricultural activity, substantial amounts of waste are produced: raw biomass, water, and byproducts. Therefore, Indonesia's palm oil sector could rejoin sustainable production and rentability, far beyond the sole purpose of consumption. Indeed, waste valuing, concerning the commonly considered unusable outputs may lead to a whole new opportunity, turning waste into valuable products. Fertilizers, biofuels, materials, chemicals, animal feed only to enumerate these can be manufactured from waste and promote a future competitive industry in Indonesia. The goal of the attached research "waste to value analysis of a palm oil industry" is to point out possibilities in valuing the palm oil supply chain, from harvesting to end of life. As raw materials and oil reserves are condemned to lower over the years, substitutes, cleaner and locally produced may insure and strengthen the energetic and agricultural independence of Indonesia.

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