

Indonesia's Palm Oil Plantations: How Poverty Fuels Pollution in Low- to Middle-Income Countries

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ABSTRACT

Indonesia's societal and environmental well-being faces turmoil in the absence of stringent monitoring of industrial practices, resulting in severe pollution and a corresponding decline in quality of life. Stigmatising the root cause of pollution as a direct externality of negligent environmental choices is a privileged misconception that often overlooks the reality faced by low- to middle-income countries like Indonesia. Housing a third of the ASEAN population, where a significant portion lives below the poverty line (O'Neill, 2023), pollution is often an unintended consequence of economic survival. **This research examines the complex relationship between poverty and pollution, focusing on palm oil plantations. In this context, poverty not only suffers from pollution but also drives it, as communities reliant on agriculture resort to environmentally harmful practices to sustain their livelihoods.**

METHODOLOGY

Literature Review

- Compilation of existing research on socio-economic impacts on environmental health.
- Sources: Peer-reviewed journals, government reports, and NGO publications.

Quantitative Analysis; Case Study

Palm Oil Plantations and Forest Fires

- Data: Satellite imagery, fire occurrence records, and economic activity data.
- Analysis: Geospatial and statistical analysis to correlate income levels with the frequency and intensity of forest fires.

RESULTS

Indonesia is the largest global producer and distributor of palm oil, playing a major role in Indonesia's GDP. This industry promises economic growth by trade, providing employment and development opportunities throughout Indonesia. However, the socio-economic impacts are not evenly distributed across all regions and communities, most apparent in palm hotspots such as Sumatra and Kalimantan.

ENVIRONMENTAL IMPACTS

The rapid transformation of forests into suitable land for palm oil cultivation often involves land clearing via fire. This slash-and-burn technique is often used as a quick and easy method to clear peatlands. However, it entails **severe air pollution, contributing to the haze problem** that affects not only Indonesia, but also neighbouring countries.

HEALTH & SOCIAL COSTS

Respiratory diseases such as asthma and bronchitis spiked during the haze periods, with hospitals reporting a 30-40% increase in cases. The economic cost of the haze in 2015 was estimated at \$16 billion, including healthcare costs and lost productivity. Children and the elderly are particularly vulnerable, with long-term exposure linked to chronic lung conditions and reduced life expectancy.

UNEVEN DISTRIBUTION OF BENEFITS

Between 2000 and 2015, many new plantations were established in villages that had long depended on subsistence farming. **These communities were unprepared for the rapid shift to a market-driven economy, often worsening poverty and displacement.** In Kalimantan, poverty rates rose by 14% in villages that faced sudden integration into the palm oil industry, further entrenching socio-economic inequalities and disrupting traditional livelihoods (Santika et al., 2019).

LACK OF INFRASTRUCTURE & FACILITIES

The rapid industrialization brought by palm oil expansion has not been matched by adequate improvements in infrastructure. Many villages still suffer from a lack of basic amenities such as electricity, healthcare, and education. The insufficient infrastructure perpetuates poverty and limits access to essential services, further entrenching social inequalities. The lack of healthcare facilities and schools hampers long-term community well-being and restricts opportunities for economic advancement, particularly in rural regions.

DISCUSSION

INTERNATIONAL RELATIONS

Neighbouring countries, namely Malaysia and Singapore, play pivotal roles in Indonesia's palm oil industry, with many international companies based in these countries holding substantial shares. Despite reaping financial benefits, these stakeholders face criticism for a **lack of accountability in addressing environmental damage, particularly the cross-border haze caused by land burning.**

TAX & GOVERNMENT SPENDING

Within Indonesia, **improper allocation of tax revenue, compounded by corruption and tax evasion, has hindered infrastructure development** in the regions most impacted by palm oil expansion. Instead of enhancing essential services like healthcare, education, and electricity, the industry's profits remain unequally distributed, as communities grapple with labor exploitation, pollution-related health issues, low wages, and inadequate social support.

CONCLUSION

This research highlights poverty as a key catalyst for pollution in Indonesia, particularly within the palm oil industry. Economic pressures drive communities to engage in environmentally destructive practices, such as land burning, to sustain their livelihoods. **While palm oil contributes substantially to the national economy, its benefits largely bypass communities bearing the environmental burden, perpetuating a cycle of poverty and pollution. Poverty not only worsens environmental harm but is further entrenched by it, trapping communities in this cycle.**

Breaking this cycle requires comprehensive policy interventions focused on poverty alleviation, sustainable agricultural practices, and equitable resource distribution. Additionally, enforcing fair tax regulations and accountability measures can ensure that local communities receive tangible benefits from the industry's wealth. Only through these combined efforts can Indonesia achieve balanced economic growth that supports environmental sustainability, reducing poverty-driven pollution.

REFERENCES

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Environmental Degradation vs. Infrastructure Benefits: Land Burning Regions vs. Electrified Roads (KALIMANTAN)

Red represents areas with high levels of land burning, while blue indicates regions with low access to electrified roads.

