

Emissions from Palm Biodiesel far higher than conventional Diesel due to Land Use Change: Good Governance and Support for Palm Oil Farmers Key to sustainable supply chain

Jakarta, 7 May 2019 - Carbon emissions from the production of crude palm oil (CPO) for biodiesel in Indonesia are higher than conventional diesel, according to a new study released today by Indonesia-based think-tank Traction Energy Asia.

“Emissions from Biodiesel Production in Indonesia” uses a combination of life-cycle analysis (LCA), including previous studies on LCA of CPO biodiesel as a reference, palm oil company sustainability reports, field research, and field surveys with independent palm oil farmers. The life-cycle analysis includes an assessment of emissions across the entire supply chain of CPO biodiesel production, from seed nursery and plantation, to mill, refinery, blending station and distribution.(1)

“Biodiesel produced using CPO can support Indonesia’s efforts to improve energy security, reduce the cost of fuel imports, and help meet its emissions reduction commitments. However, if no measures are taken to develop a verifiably sustainable supply chain for CPO biodiesel, the government’s promotion of palm biodiesel for domestic consumption threatens further land use change, including deforestation, and increased emissions from plantation expansion”, said Ricky Amukti, research team leader at Traction Energy Asia.

While land use change, including deforestation and, particularly the conversion of peatland to palm oil in existing plantations, is the biggest source of emissions from CPO biodiesel production, other significant emissions sources are transport and palm oil mill effluent (POME). While emissions in the CPO biodiesel supply chain could be reduced by 50%-80% at mill stage through methane capture and use for biogas, greater reductions could be achieved if land use change was avoided altogether. To meet the government’s energy mix target in 2025, biodiesel production is planned to increase from 6.01 million kiloliters in 2018 to 13.8 million kiloliters by 2025, a sizeable jump that will require plantation expansion and risk further land use change.

To ensure that biodiesel production does not cause further deforestation, it requires significant improvements in forest governance. This must include extending and strengthening the palm oil moratorium and the Indonesia Sustainable Palm Oil System (ISPO). It is crucial that the government also acknowledges that, while palm biodiesel may have lower emissions when burnt, its production also causes significant carbon emissions from land use change.

In order to move Indonesia towards a verifiably sustainable supply chain for CPO, it is also crucial that small-scale palm oil farmers, who account for around 40% of total production, are given the support they need to learn and to implement best agricultural practices. With the right level of support and tools small-scale palm oil farmers can quickly learn the techniques they need to increase productivity in a sustainable way to improve yields and sustainability, including replanting on degraded lands.

Indonesia can take the right steps towards ensuring a sustainable supply of CPO biodiesel production by;

- measuring and reporting carbon emissions,
- improving traceability,
- supporting small-scale palm oil farmers,
- only permitting expansion on degraded lands,
- incentivizing the use of non-plant based alternative fuels, e.g. 2nd generation biofuels from waste, such as used cooking oil,
- installing methane capture equipment for palm oil mill effluent (POME) ponds to reduce emissions and supply biogas.

Contacts:

Ricky H. Amukti, Research Team Leader Traction Energy Asia

Telp : +6287781893015

email : ricky.amukti@tractionenergy.asia

Notes for Editors:

(1) Link to Executive Summary “Greenhouse Gas Emissions from CPO for Biodiesel”