Plantation management practices of independent oil palm smallholders in Central Kalimantan:

exploring the potential and limitations of standards for Good Agricultural Practices

A science-for-policy brief by the SEnSOR programme

Study Aim

Independent oil palm smallholders experience substantial **yield gaps**. Yield gaps are partly related **to plantation management practices**, in particular, the use of low quality planting material; suboptimal nutrient management; and long harvesting cycles. Closing this yield gap is considered essential to achieve the dual objectives of strengthening rural economies by increasing smallholders' incomes, while halting deforestation by reducing the need for expansion.

The main objective of this study is to assess the potential and limitations of standards for Good Agricultural Practices as part of RSPO certification. We explored current plantation management practices and yield in independent oil palm smallholdings in Central Kalimantan, Indonesia and investigated the **socio-economic, institutional and cultural factors** that underlie these plantation management practices.

The research questions are:

1) How do different categories of independent oil palm smallholders manage their oil palm plantations?

2) Which socio-economic, institutional and cultural factors underlie smallholders' management practices?

Methods

- We conducted **case studies** in three oil palm villages in Central Kalimantan, including smallholders with and without a transmigration background, and smallholders with and without a history of being participant in an outgrower scheme (ex-plasma and non-plasma).
- We used a combination of **quantitative smallholder** surveys with 133 oil palm smallholders, and 42 **qualitative in-depth interviews** with oil palm smallholders and farmer group leaders about smallholder characteristics, plantation management practices, and supply chain conditions.
- Qualitative data was analysed through thematic coding and triangulated with statistical analysis on data from the smallholder surveys.

Findings

1) How do different categories of independent oil palm smallholders manage their oil palm plantations?

- Smallholders from all three villages used **planting material from informal distribution channels**, including saplings pulled from the fringes of company plantation, which may have lower oil extraction rates (*dura*), or do not produce fruit bunches (*pisifera*).
- Non-plasma smallholders, in particular, **did not always apply fertiliser**, or applied a low dose, because these were expensive and not always available.
- Non-plasma smallholders often had **long harvesting cycles** between 21-30 days.
- With applying more fertiliser and shorter harvest intervals (14 days), ex-plasma smallholders had **higher yields** than non-plasma smallholders. (24 ton, compared to 17 ton and 15 ton ha^{-1} $year^{-1}$)
- Both ex-plasma and non-plasma smallholders, **managed their plantations individually** and **marketed FFB independently** through local collectors.

2) Which socio-economic, institutional and cultural factors underlie smallholders' management practices?

- Smallholders did not follow **agronomic training** on oil palm cultivation prior to planting oil palm, but some have experience from working on company plantations.
- Ex-plasma smallholders were **organised in a cooperative focussed on oil palm**, which provided access to credit, training, and organic and inorganic fertiliser.
- In contrast, non-plasma smallholders were **not organised** around the production of palm oil.
- Smallholders based decisions on plantation management on **short term estimations of costs and benefits** of selling fresh fruit bunches at a **certain price, often leading to irregular management.**
- When labour, transport and transaction costs were considered to outweigh the benefits from selling FFB, smallholders **sometimes postponed the harvest** or **chose not to apply fertilisers, both potentially compromising future yields.**
- In particular in the more remote, non-transmigrant village, the **uptake capacity of the middlemen** was limited and **transportation costs** were high.

Recommendations

- Training in Good Agricultural Practices as part of RSPO certification should be **adapted to smallholders' needs and restricted access to inputs, credit, and labour** which condition the implementation of better management practices.
- For example, training on better nutrient management should help smallholders to **choose** a type and amount of fertiliser that is **available**, and **suited to their budget**, as well as the **nutrient needs of their palms**.
- Also, training in GAP standards should **prioritise relatively low cost improvements** in management practices, such as timely harvesting and proper maintenance.
- To make sure yield increase leads to higher and / or more stable incomes for oil palm smallholders, smallholders must be able to **timely market their FFB**. Therefore, **bottlenecks in the supply chain** must be addressed prior to implementing GAP standards.

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Photo: interview with smallholder Central Kalimantan. **Photo credits:** Grace Sibarani