A study into outcomes of RSPO certification for independent smallholders

A science-for-policy brief by the SEnSOR programme
Study Aim

We assessed the outcomes of RSPO certification for independent oil palm smallholders with regards to management practices, yield, income, and ecosystem services by comparing non-certified and RSPO certified smallholders in Central Kalimantan, Indonesia. The central questions in our study were:

**Question 1:** What are the differences in management practices, yields, income and ecosystem services between certified and non-certified smallholders?

Independent oil palm smallholders often lag far behind in yield compared to company plantations and schemed-smallholders, leading to lower and insecure income from oil palm. In this study, we examined if RSPO certified smallholders have different management practices and obtained higher yields, income and ecosystem services compared to non-certified smallholders.

**Question 2:** How can these differences be explained by RSPO certification or other socio-economic factors?

The rationale behind RSPO certification is that if smallholders adhere to standards for better management practices, their yields will improve, and ecosystem services will be protected. We examined which factors might explain differences between certified and non-certified smallholders, and how RSPO certification can support better management practices.

Methods

- **128 surveys** with RSPO certified and non-certified independent smallholders in Central Kalimantan.
- **59 plots studies** in certified and non-certified smallholder’s plantations.

**Question 1:** we scored smallholders’ plantation management practices based on RSPO standards for good agricultural practices, and calculated average yield of Fresh Fruit Bunches (t ha year). To compare ecosystem services we sampled above ground carbon stock, ground cover vegetation richness, and herbivory in certified and non-certified smallholdings. Some non-certified smallholdings practiced intercropping and we investigated whether this affected ecosystem service provision.

**Question 2:** we used regression models to examine which factors contribute to higher yields and assessed how these factors were related to RSPO certification. In addition, we examined whether above ground carbon stocks, herbivory levels and ground cover vegetation species diversity were related to differences in management practices in certified and non-certified plantations.
Question 1:
- RSPO Certified smallholders had significantly higher yields and higher scores for management practices compared to non-certified smallholders.
- RSPO Certified smallholders used better planting material and applied more and better combinations of fertiliser, including empty fruit bunches.
- As certified smallholders had higher yields, they had higher revenues from their oil palm plantations.
- Our study found very little difference in the provision of ecosystem services between certified and non-certified smallholders.
- Intercropping reduced above ground carbon stocks because oil palm densities were reduced and intercrop species were mostly herbaceous.

Question 2:
- The regression model did not show a significant relationship between management and yield.
- However, certified smallholders were organised in groups and had long-term experience with oil palm, giving them a good starting position prior to certification.
- In areas where smallholders are new to oil palm, where the supply chain is not yet well established, and smallholders have little connections to the RSPO, it may be challenging to make them eligible for certification.
- The lack of difference in ecosystem services is related to similarity in management practices, as well as current standards for good agricultural practices not being primarily focused on sustaining ecosystem services.

Performance of certified and non-certified smallholders

Figure 1: comparison performance between certified and non-certified smallholders. * indicates significant difference.
Recommendations

1. Certified smallholders could further **improve their plantation management** by shortening harvesting cycles, selective path and circle weeding, reducing herbicide use, and for some, better nutrient management, including use of empty fruit bunches.

2. RSPO should develop **new ways to engage with independent smallholders that are not already well supported** by government, large grower or NGO schemes in improve the impact of certification.

3. Certification standard development and research should put more focus on **enhancing ecosystem service provision in the planted area** in addition to the current focus on ecosystem service provisional in natural habitat set-asides.

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