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# Sustainable production and consumption of palm oil in Indonesia: What can stakeholder perceptions offer to the debate?

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## ABSTRACT

Meeting the global demand for palm oil poses great sustainability challenges. Indonesia is experiencing one of the largest oil palm expansions worldwide. Important socioeconomic and environmental impacts of the palm oil sector remain unsolved including conflicts over land tenure, loss of biodiversity, air pollution and emission of greenhouse gases. The Roundtable on Sustainable Palm Oil (RSPO) is a multi-stakeholder alliance promoting best practices along palm oil supply chains. However, the RSPO's potential to truly enhance the sustainability of palm oil production and consumption has been questioned. The different stakeholder groups that comprise the RSPO often hold different agendas and perspectives, posing a barrier for enhancing the sustainability of the sector. Moreover, RSPO stakeholders' perceptions may not be necessarily attuned to local realities and sensibilities in Indonesia. This paper, (a) provides a rapid appraisal of the perceptions on the barriers for improving palm oil sustainability as held by the main RSPO stakeholder groups and (b) contrasts them with the views of local communities in oil palm expansion areas. Our results suggest that RSPO stakeholders' perceptions about enhancing palm oil sustainability are overall highly divergent. However there seemed to be an underlying common optimism among some RSPO stakeholders and local communities about the feasibility of a technical fix. Understanding RSPO stakeholders' perceptions can enrich the current debate about the sustainable production and consumption of palm oil that is usually informed by rigorous yet highly compartmentalized research.

**Keywords:** Palm oil; Sustainability; Stakeholder perceptions; Local communities; RSPO; Indonesia

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**Abbreviations:** GHG, Greenhouse Gas; ISPO, Indonesian Sustainable Palm Oil standard; LUCC, Land Use and Cover Change; NGO, Non-Governmental Organization; RSPO, Roundtable on Sustainable Palm Oil.

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## 1. Introduction

Palm oil<sup>1</sup> is the most widely produced vegetable oil worldwide, accounting for 33.6% of global vegetable oil production in 2013 (FAO, 2015). In 2012 it became the fourth most widely traded agricultural commodity in monetary terms, at over USD 35.5 billion (FAO, 2015). In 2013, Indonesia and Malaysia accounted for 84.8% of global palm oil production and 87.3% of palm oil exports (FAO, 2015). In Indonesia alone, oil palm areas expanded approximately 100-fold between 1961 and 2013, while palm fruit yields increased by 26.9% in the same period (FAO, 2015) (Fig. 1). With global vegetable oil demand expected to triple by 2050 (FAO, 2006), areas under oil palm cultivation are bound to expand significantly in Southeast Asia (Corley and Hereward, 2009; Koh and Lee, 2012). In fact, Indonesia is planning to double palm fruit production by 2020 (Koh and Ghazoul, 2010).

Nevertheless, the palm oil sector can have significant environmental and socioeconomic impacts. Common production practices such as extensive monoculture, expansion in forested areas, land clearing through fire, high fertilizer/pesticide use and the generation of palm oil mill effluent (POME) can be damaging to biodiversity and the environment (Section 2.1). Palm oil production can also have important socioeconomic impacts particularly related to employment, income generation, public health and social conflicts (Section 2.2).

In the late 1990s the palm oil sector started facing criticism about some of its environmental and social practices at different stages of the palm oil production and consumption chain (Schouten and Glasbergen, 2011). Such concerns catalyzed the establishment of the Roundtable on Sustainable Palm Oil (RSPO) in 2004. RSPO is a multi-stakeholder alliance that aims to promote the sustainable production and consumption of palm oil by bringing together key actors across the palm oil chain, such as large producers, smallholders,<sup>2</sup> processors, traders, non-governmental organizations (NGOs) and certifiers among others. In 2007 the RSPO launched a voluntary, third party certification scheme that aims to enhance the sustainability of palm oil production (RSPO, 2013). Despite the initially slow take-up of the RSPO standard, in 2012 the RSPO-certified growers accounted for approximately 28% of global palm oil production, with 42% of their product being already certified (RSPO, 2012). This corresponds to approximately 11% of global palm oil production (RSPO, 2012).

Despite being a step forward for improving the sustainability performance of a sector that has faced severe scrutiny because of its past practices, the broader legitimacy of the RSPO has been questioned (Schouten and Glasbergen, 2011; Partzsch, 2009; Silva-Castaneda, 2012; von Geibler, 2013;

Nikoloyuk et al., 2010). This is largely due to the fact that RSPO stakeholders have joined (and operate within) the alliance probably having radically different agendas and motivations, ranging from ethical to purely pragmatic<sup>3</sup> (Schouten and Glasbergen, 2011). This suggests divergent, and perhaps, conflicting opinions within the RSPO on what constitutes sustainable palm oil. Moreover, certain RSPO definitions, criteria and processes have faced criticism by groups outside the RSPO (Schouten and Glasbergen, 2011; Silva-Castaneda, 2012; Marin-Burgos et al., 2015). These divergent views within, and beyond RSPO, throw into doubt its ability to effectively promote the sustainable production and consumption of palm oil (Partzsch, 2009).

To the authors' best knowledge there is lack of studies that empirically capture the perceptions of different RSPO stakeholders as they relate to palm oil sustainability. Capturing and understanding the multiplicity of these perceptions<sup>4</sup> is particularly relevant for the RSPO, as these differences can complicate the attainment of consensus (Schouten and Glasbergen, 2011; Partzsch, 2009; Silva-Castaneda, 2012; von Geibler, 2013). Given the dominance of the palm oil industry within RSPO, the freedom of non-certified members to join and the widespread non-compliance among members (Laurance et al., 2010), understanding these different perceptions could help identify heavily contested sustainability issues, which is particularly important for an organization such as the RSPO that depends on consensus decisions between its members.

The aim of this paper is to identify the diverse perceptions about palm oil sustainability held by the different stakeholders involved/affected by the palm oil sector. In particular our study (a) identifies the perceptions of the main stakeholder groups involved in the RSPO process on the feasibility and the barriers for enhancing the sustainability of palm oil production and consumption; and (b) contrasts RSPO stakeholders' perceptions with those of local communities regarding the "on-the-ground" sustainability impacts of oil palm production. We focus on rural communities in Indonesia that have been affected by oil palm expansion but are not directly involved in the RSPO process, as a means of understanding whether the RSPO is in tune with local realities and sensibilities in Indonesia.

Section 2 offers a brief, yet comprehensive, review of the main sustainability impacts of palm oil production in Indonesia as a first step towards identifying the key sustainability issues that will be considered in the analysis. Section 3

<sup>1</sup> Palm oil is a widely consumed and highly versatile food commodity. It can be used directly for cooking as well as an ingredient in various processed foods. It is also an important raw material in the pharmaceutical and cosmetic industries. Recently palm oil has gained attention as a feedstock for biodiesel production (Gasparatos and Stromberg, 2012). Currently palm oil is mainly absorbed by the food industry. However, it is expected that by 2050, 42% of the global vegetable oil production will be diverted towards industrial uses, compared to just 16% in 1976 and 24% in 2006 (FAO, 2006).

<sup>2</sup> RSPO defines "smallholders" as "farmers growing oil palm, sometimes along with subsistence production of other crops, where the family provides the majority of labor and the farm provides the principal source of income, and where the planted area of oil palm is usually below 50 hectares in size" (RSPO, 2007).

<sup>3</sup> For example, Köhne (2014) documents land conflicts in Indonesia between large oil palm producers and local communities, where the former used the RSPO to strengthen their position, i.e. by following RSPO-legitimized procedures they produced evidence that activities in their plantations were in line with RSPO regulations, thus linking up to RSPO's claims of palm oil sustainability.

<sup>4</sup> Stakeholder involvement in environmental management has gained attention as an effective means of dealing with the complexity of environmental problems (Reed, 2008). In complex sustainability issues, understanding the perceptions of impacts among different stakeholder groups can provide valuable information about response effectiveness across environmental/socioeconomic dimensions and geographical/temporal scales (e.g. Shackley and Deanwood, 2002). Considering stakeholder perceptions when addressing sustainability issues is particularly pertinent in the agricultural sector, where complex environmental and socioeconomic factors interact across geographical and temporal scales (Pretty, 1994).

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