

Table: Strengths and weaknesses of a unified the ecosystem services framework to synthesize and assess biofuel trade-offs

Strengths	Weaknesses
Adopt a systems-perspective. Transdisciplinary focus. Use-relevant rather than curiosity-driven research approaches. Sustainability science and the ES approach enjoy a broad acceptance among academics, practitioners and policymakers internationally.	Might merely help stakeholders to better argue their entrenched positions. Imposes a single framing of biofuel sustainability, suppressing thus the differences between (often mutually incompatible) stakeholder values, perceptions, expectations, and framings. Obscures ecological, economic, and political complexities and overlooks the needs and interests of communities that have been poorly (or not at all) represented during the construction of the synthesis frameworks. Risks promoting 'stealth issue advocacy', downplaying uncertainty and narrowing down the available range of policy alternatives.

Source: Gasparatos et al., 2013. *Biomass Bioenergy* 50, 75-80.

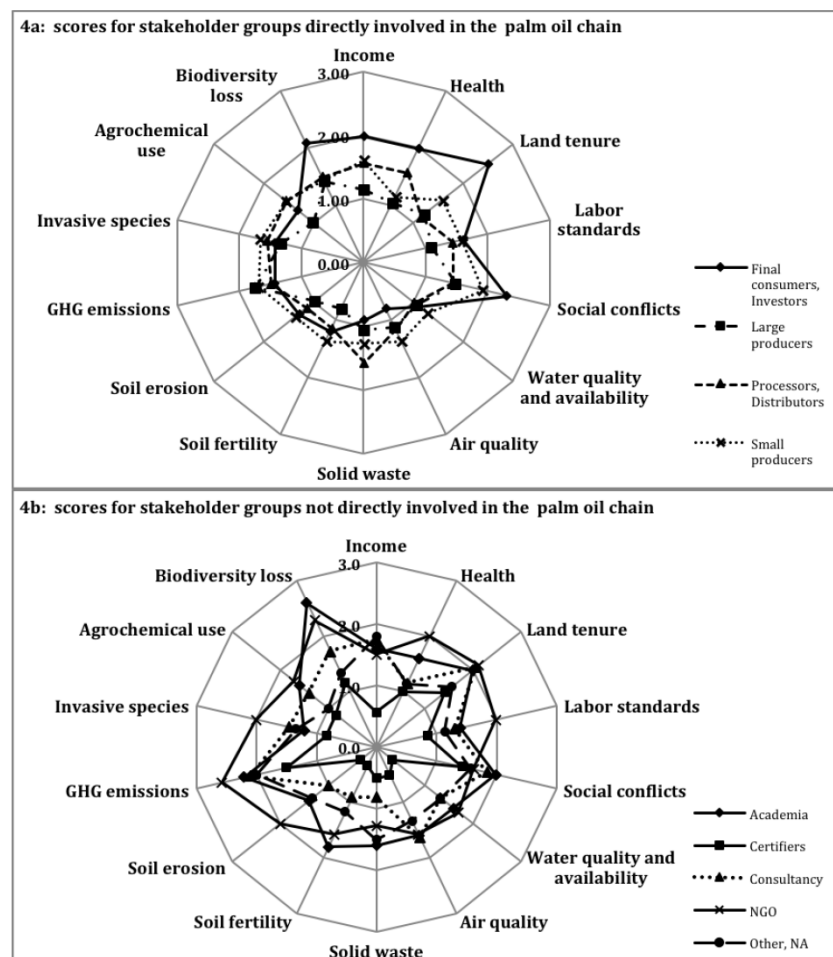


Figure: Perceptions oil palm expansion impacts on ecosystem services, human wellbeing and biodiversity for stakeholders directly involved (upper figure) and not directly involved (lower figure) in palm oil chains.

Note: Higher scores denote more severe perceived impact and greater difficulty to ameliorate it.

Source: Moreno-Penaranda, Gasparatos et al., *in preparation*