

We welcome the insightful critiques and specific concerns raised by Erbaugh & Agrawal (2017) of our recent treatise on landscape approaches (Reed et al. 2016). Their contribution provides an opportunity to clarify and advance an important debate about both the nature and future of multi-functional land management.

Erbaugh and Agrawal (2017) rightly highlight some of the conceptual difficulties involved in defining the landscape approach, and our 'definition' was more a suggestion for how a landscape approach (LA) could be, and often is, conceived rather than a concrete characterization of how it should be. We have, throughout our work, tried to avoid prescriptive approaches. Although we recognize that this may have been unclear in the excerpt highlighted by Erbaugh and Agrawal (2017), we believe that this more open interpretation was evident in the context of our article(s) (Reed et al., 2016; Reed et al., 2017) where we acknowledge the complexity and ambiguity of standardized definitions.

Some of the confusion stems from our use of the term "framework", as this term's precise definition varies across disciplines. Given its specific meaning within social-ecological research (Ostrom, 2009), we agree with the concerns raised by Erbaugh and Agrawal that it is not suitable for describing the landscape approach in itself. We also agree that testable frameworks for implementation should be built on what Erbaugh and Agrawal refer to as the LA "management ethic" and what we regularly refer to as a LA "process" (rather than a project or rigid management formula). In fact, it was for this reason that we aimed to "provide the basis for the development of improved landscape management frameworks" (Reed et al. 2016). Thus, by and large there is general agreement—discipline-specific use of terms aside.

Erbaugh and Agrawal (2017) also question why the "ten principles" of Sayer et al. (2013) were not included in the search strategy for the systematic review our publications are based on. As Erbaugh and Agrawal are no doubt aware, we undertook a thorough, and systematic, review process focusing on landscape approaches and their implementation. The methods employed are clearly outlined in Reed et al. (2015). In short, in order to best balance inclusivity with specificity, our applied terms were necessarily more general than the ten principles alone. However, we did include the ten principles as variables within our data collection strategy. Importantly, we carefully evaluated over 17,000 documents, making this the largest ever assessment of landscape approach theory and application undertaken to date. As such, we believe our conclusions are robust, and would not be further influenced by relatively minor changes in the search terms. Moreover, we also agree with Erbaugh and Agrawal's assertion that "... most forms of environmental governance (Lemos & Agrawal, 2006) might be considered a LA", and are confident we used search terms that captured this broad definition. Indeed, the fact that many forms of environmental governance (under any guise or name) might be considered representative of a LA process—or could benefit from adopting LA principles—was emphasized in our follow up publication evaluating LA implementation in the tropics (Reed et al. 2017). Here, although we failed to find a single study that fully represented the LA as we perceive it, we did find a number of studies without reference to the LA *per se* that showed characteristics of an intrinsic LA philosophy (Reed et al. 2017).

Importantly, we find ourselves in agreement with Erbaugh and Agrawal (2017) that, despite LA specific research remaining nascent, there is growing international and cross sectorial interest in the approach as a pathway to achieving multi-scalar goals and targets of local to global significance. Careful and critical scholarship will play an important role in deciding the fate of the approach—including open discussions such as these.

## References

- Erbaugh, J. T., & Agrawal, A. (2017). Clarifying the landscape approach: A Letter to the Editor on “Integrated landscape approaches to managing social and environmental issues in the tropics.” *Global Change Biology*, 0–2. <https://doi.org/10.1111/ijlh.12426>
- Lemos, M. C., & Agrawal, A. (2006). Environmental Governance. *Annual Review of Environment and Resources*, 31(1), 297–325. <https://doi.org/10.1146/annurev.energy.31.042605.135621>
- Ostrom, E. (2009). A general framework for analyzing sustainability of. *Science*, 325(July), 419–422. <https://doi.org/10.1126/science.1172133>
- Reed, J., Deakin, L., & Sunderland, T. (2015). What are “ Integrated Landscape Approaches ” and how effectively have they been implemented in the tropics : a systematic map protocol. *Environmental Evidence*, 4(1), 1–7. <https://doi.org/10.1186/2047-2382-4-2>
- Reed, J., Van Vianen, J., Deakin, E. L., Barlow, J., & Sunderland, T. (2016). Integrated landscape approaches to managing social and environmental issues in the tropics: learning from the past to guide the future. *Global Change Biology*, n/a-n/a. JOUR. <https://doi.org/10.1111/gcb.13284>
- Reed, J., Vianen, J. Van, Barlow, J., & Sunderland, T. (2017). Have integrated landscape approaches reconciled societal and environmental issues in the tropics ? *Land Use Policy*, 63, 481–492. <https://doi.org/10.1016/j.landusepol.2017.02.021>
- Sayer, J., Sunderland, T., Ghazoul, J., Pfund, J. L., Sheil, D., Meijaard, E., ... Buck, L. E. (2013). Ten principles for a landscape approach to reconciling agriculture, conservation, and other competing land uses. *Proceedings of the National Academy of Sciences of the United States of America*, 110(21), 8349–8356.