

## Review of: "Ecosystem Services Inequality Driven by Agroextractivism in Salamina, Colombia: A Critical Institutional Analysis"

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Potential competing interests: No potential competing interests to declare.

This paper aims to analyse the socio-political impacts of the expansion of the plantations of avocado HASS fruits in the agroforestry systems of Colombia by combining the frameworks of Ecosystem Services (ES) and Critical Institutionalism (CI). Combining both frameworks is an interesting way to examine the multi-level implementation of natural resources policies related to agroforestry in a given context, in this case, the Selena District in Colombia.

Yet, the argumentation of the paper is unclear to me and difficult to follow.

First, the analysis and comprehension would also be facilitated by more concise and specific writing, avoiding repetition of argumentation along the text.

I also suggest restructuring the paper in order to more clearly differentiate what is being demonstrated in the paper, what has been demonstrated in previous work, and what is part of the context presentation. It is, for example, rather confusing to find most of the tables that summarize the results at the end of the paper, where readers would expect the discussion and conclusion. Another example lies in the late identification for the reader of the ES that are concretely being considered in the paper, which seems to be only water provision and agricultural production.

Integrating two conceptual frameworks can be a difficult task that requires a good analysis of each framework and a clear definition of the different notions and concepts underpinning them. There are margins of improvement here: The paper mobilizes concepts which are not necessarily central to the main point of the paper - such as food systems transition. On the other hand, some key notions such as "ES cascade" or the structuration of the ES framework in 4 components (structure, functions, benefits, value) are not properly defined, presented, explained, and illustrated with the case study. But more importantly, the key concept of "social justice" is not properly defined. A better understanding of this concept would probably have led the author to analyze the impacts in terms of equity rather than equality. It would also have helped to identify key questions such as: what does equitable ES services access mean? What is the link between governance and procedural equity?

One could also discuss the choices (1) to limit the role of power in governance to the notion of authority and hierarchical governance (2) to focalize on a hierarchical (others would call it nested governance), excluding without proper justification a representation of governance as polycentric as argued by Ostrom.



I also miss an analysis of the concept of ES and its difficulties in relation to the issue of scale - which is a key focus of the paper. While arguing to study the critical institutional framework at the local level (local not being properly defined and thus seeming to mean landscape sometimes and commune other times), the paper spent some length dealing with the national-level governance framework. By definition, ES nature and/or value changes according to actors' preoccupations, and thus the key ES can change according to the level of analysis - and the relevant actors considered. What is at stake is the nature of the relationships between stakeholders and ES, which deserves a deeper analysis, as well as the relationships between one defined service and ecosystem functioning, which is not presented in the paper.

The relationship between governance systems and ES is also confused. A deeper analysis of the concept of governance - in relation to institutions and the critical institutional framework - could also help better differentiate between natural resources governance and ecosystems services governance. At the moment, I understand that the services studied are related to different resources (water, land), each of them being governed by different governance systems and institutions, but the ES governance framework per se is unclear: Are there water provisioning policies? Are there agricultural land productivity policies? It is important for different kinds of institutional and governance frameworks to be able to account for what institutions are actually being mobilized at the different levels and how they are - or not - integrated. Are in practice mobilized at the local level and - or not - integrated. I also suggest reading Virginie Maris's contribution on ES and governance.