

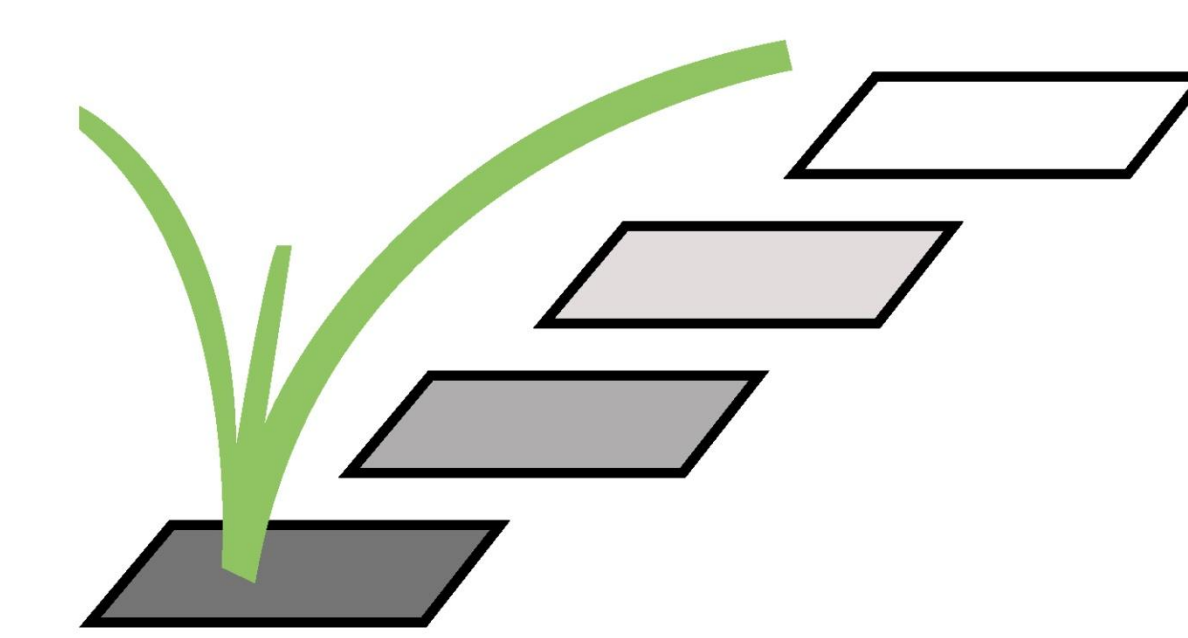
Impact Evaluation of the ICRAF Tree Domestication Program in the Peruvian Amazon: A system and participatory-based approach

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Background

The domestication and introduction of tree-species of multiple use is prone to improve livelihoods and slow down deforestation.

In 1995 the World Agroforestry Centre (ICRAF) initiated a Tree Domestication Program (TDP) in the Peruvian Amazon. It considered the identification, evaluation and introduction of selected tree-species, with strong involvement of farmers.

Goal and approaches

This study seeks at broadly identify the longer-term, intended or unintended impacts of the TDP on farmers' livelihoods.

Operationally, the TDP original assumptions are tracked to the outcomes, disclosing alongside the underlying causal mechanisms that link one with another.

The inherent complexity of the issue, i.e., social-ecological context, various stakeholders, different scales, etc. were addressed applying participatory and systems-based approaches.

Materials and methods

The study was done in the Aguaytia Watershed, Ucayali region, eastern Peru. Along the transition from the foothills of the Andes to the Amazon rainforest (80 to 800 m), with rainfalls from 1700 to 3000 mm and an average annual temperature of 25°C (Figure 1).

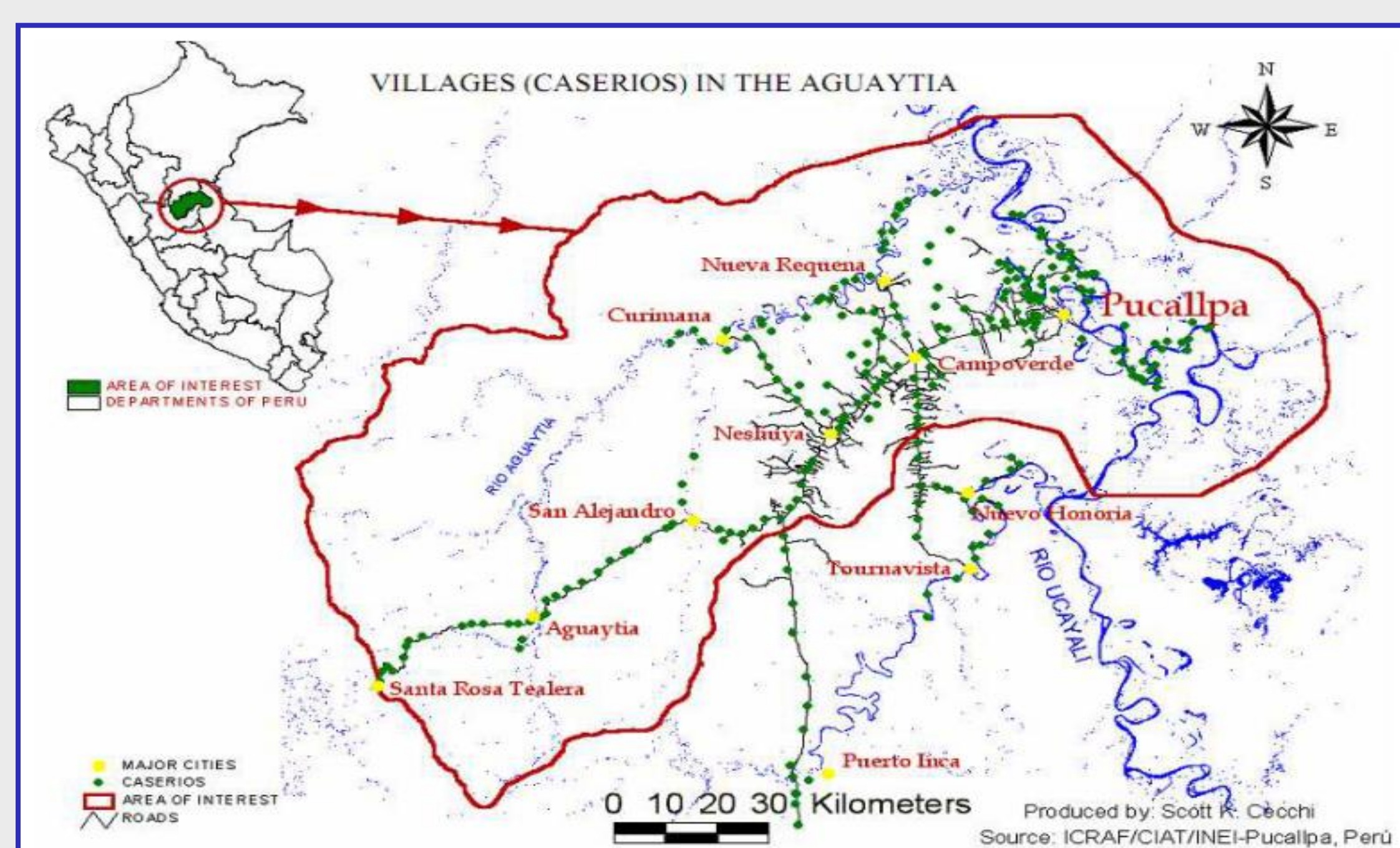


Figure 1. The Aguaytia Watershed, eastern Peru

Methodologically, an array of participatory procedures were linked up with systems modeling (Vester®), to identify, weigh and analyze representative indicators of the functioning of the system and its overall resilience, vulnerability and adaptability.

Two models were built, one for 'professionals' (stakeholders, non farmers) and another for 'farmers', and their views contrasted among each other.

Results

The indicators' interplay concerning the TDP-system functioning differs.

For 'professionals': income (12), advice (3) and organization (23) are triggering indicators; subsistence (11) depends on others; land ownership (6) acts as a weak lever; and there is no frank buffer (Figure 2).

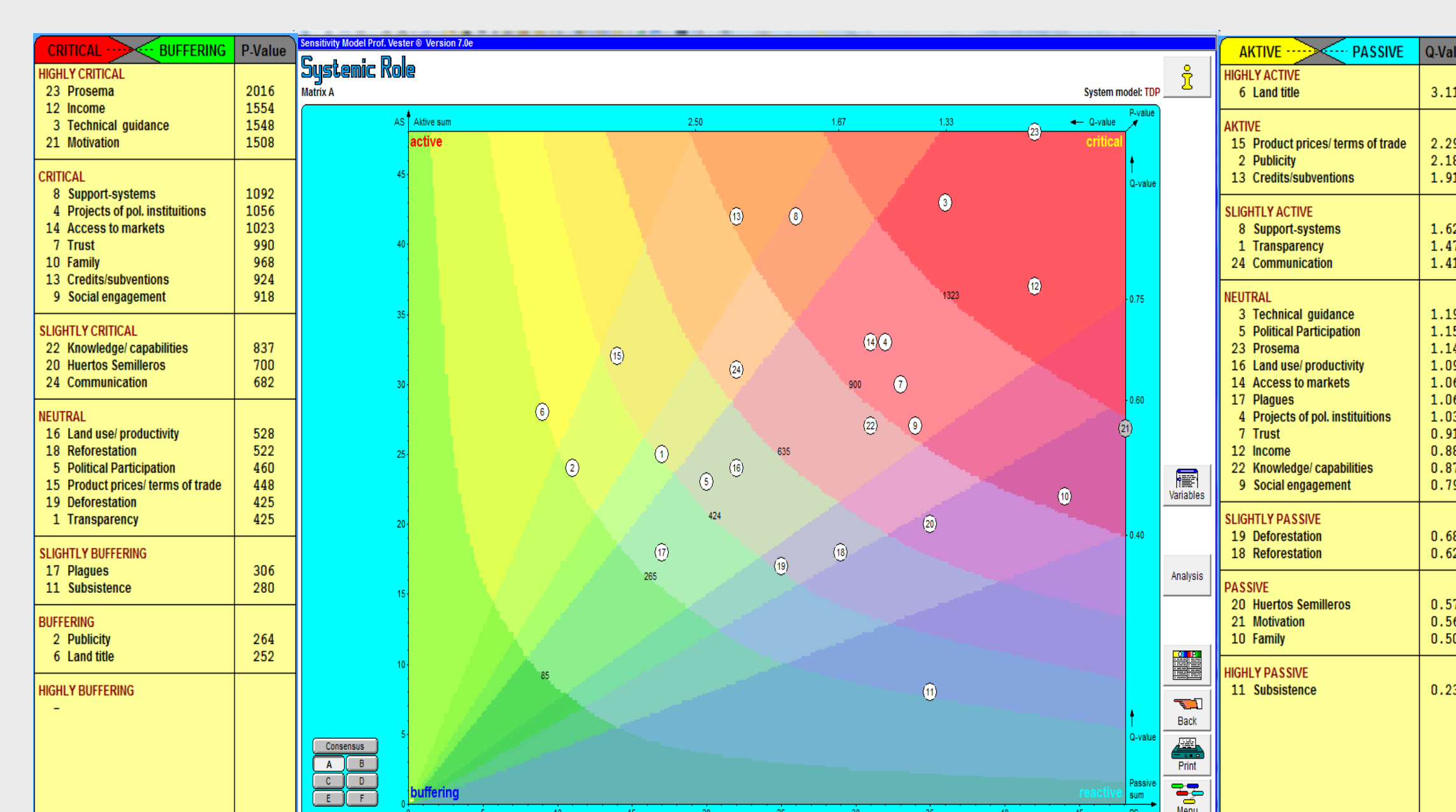


Figure 2. Systemic role of identified variables for 'professionals' (non farmers) group of analysis

'Farmers' see their TDP system rather vulnerable (many critical variables); property rights (6), political involvement (5) and public relationships (2) are influential; and neither buffering nor reactive indicators are determinant (Figure 3).

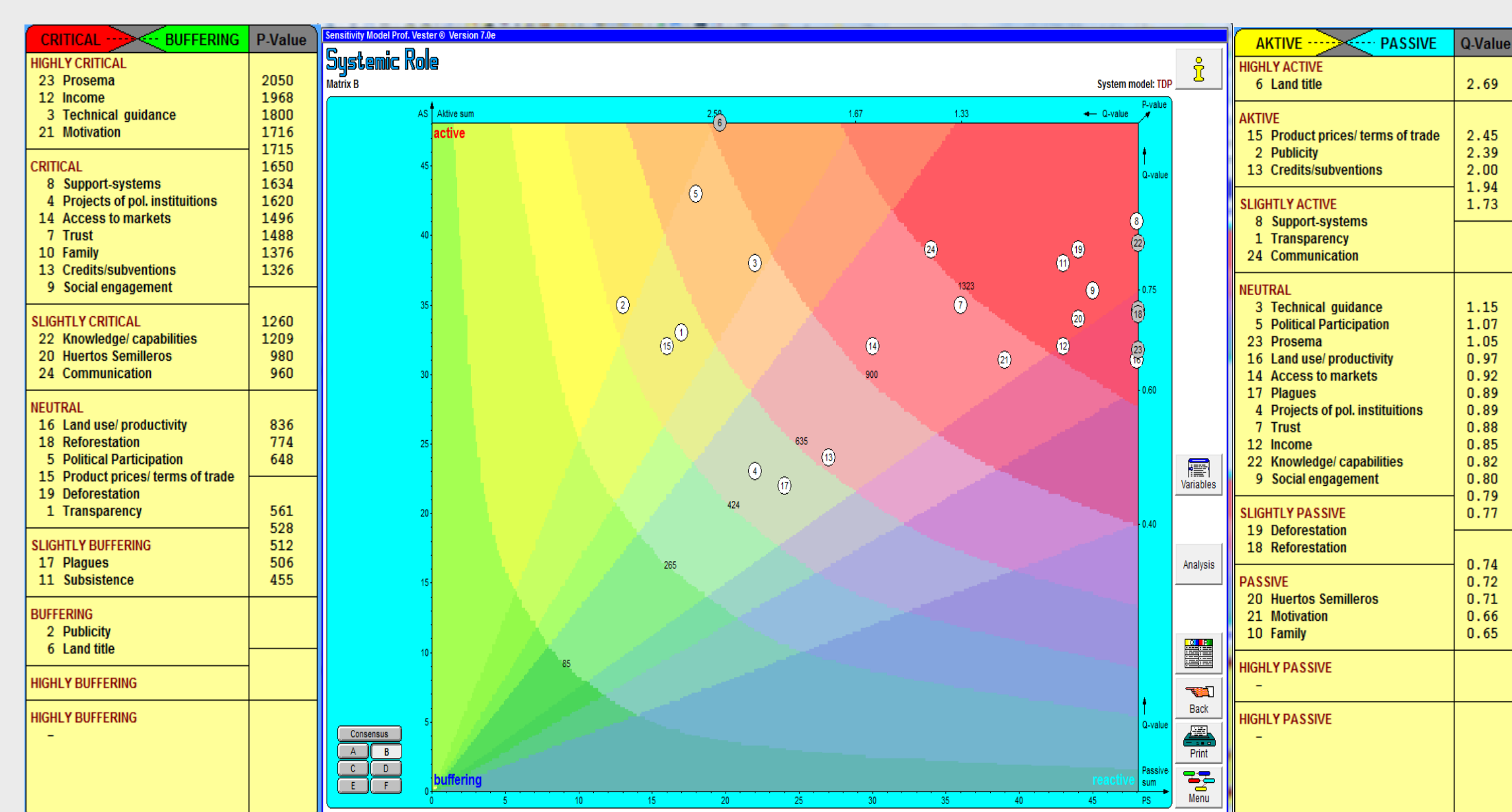


Figure 3. Systemic role of identified variables for 'farmers' group of analysis

Conclusion

The farmers and non farmers divergent criteria, (although agree on underlying income), evidence the disagreement on the TDP conceptualization and functioning.

Thus, the TDP side-impacts displaced the original goals, and stakeholders, either 'professionals' as 'farmers', profit of such a conjuncture developing alternate pathways.

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