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“Can agroecological farming feed the world?
Farmers’ and academia’s views”

How stakeholders perceive the ecosystem services and their well-being in the Corumbataí geopark project in Sao Paulo, Brazil

PAULA ODDONE SOUZA^{1,2}, DANIEL CALLO-CONCHA¹, LISA BIBER-FREUDENBERGER¹, LUCIANA CORDEIRO DE SOUZA FERNANDES²

¹*University of Bonn, Center for Development Research (ZEF), Germany*

²*State University of Campinas - UNICAMP, Brazil*

Abstract

Sustainable management involves caring on environmental, social and economic development, requiring effective policymaking. Worldviews, values and thoughts are some individual aspects that guide stakeholders’ actions. Thus, understanding how decision-makers perceive their socio-ecological circumstances is key. The UNESCO Global Geopark Network promotes sustainable development of territories for geodiversity conservation privileging a bottom-up process. The Corumbataí basin, in São Paulo state, Brazil, holds important geosites, tropical forest patches, as well as the Guarani Aquifer System. The engagement of the COMTUR (Tourism Council) members is essential for the Corumbataí Geopark Project. Therefore this study invited COMTUR members (n=81) of the 9 cities that conform the Corumbataí basin to answer an online survey. The questionnaire consisted on a 1-4 Likert scale to evaluate how the stakeholders rely on ES to their wellbeing (WB). The Likert package from R software was used to assess the social-cultural valuation of WB and ES. We performed a Sankey diagram comparing WB and ES categories to comprehend the respondent’s reliance on the ES for their WB using ggsankey package of R software. Among the WB categories, the majority highly valued Health (59.3%), Security (58.0%) and Basic Material category as important (59.3%). However, when it comes to relying on ES to their WB, we obtained a low correlation (less than 33%) for all the compared categories, although Provision (ES) had the highest (16.67%) number of significative linkages with Security and Health, WB indicators. Overall, there is a consensus about the appreciation of the categories of ES and WB, suggesting some agreement regarding their environmental and well wellbeing perception. Nonetheless, this assessment also suggests that most ES indicators are not perceived as correlated to their WB. Therefore, a framework aiming to engage the stakeholders on the Geopark Project based on an ecosystem services approach should target on highlighting the direct and indirect human wellbeing reliance on ES. Additionally, this study contributes to better understanding ecosystem services and human well-being perception in Latin America. Nonetheless, social and economic aspects can also influence social-ecological perception and further investigation is needed to comprehend them.

Keywords: Ecosystem services valuation, geopark, transition