BOOK OF
ABSTRACTS

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Advancing quantitative statistics in governance research – case study examples from tropical forest policy

T4.28 Towards quantitative explanations of forest governance and its complexity

Richard Fischer[1]

[1] Thünen Institute of Forestry, Thünen Institute, Germany

Abstract: Different and increasingly diverse demands on forests and their ecosystem services require an increasingly complex forest policy, which usually relies on various single policy instruments. In addition, combinations of individual instruments in different mostly country specific policy mixes must be considered. These are related to and driven by different stakeholders. Governance research requires adequate methods to analyse the interplay of governance components and the effectiveness of policy instruments. Using case studies on current tropical forest policies in Ecuador, Zambia and the Philippines, quantitative approaches to forest policy analysis are presented. These rely on classical governance (field) assessment methods like literature reviews, interviews and focus group discussions which are as well widely used in qualitative approaches. However, through coding and scoring, numerical data are produced that are the basis for statistical evaluations. Selected results include examples for parametric and non-parametric comparisons of means for different governance components in order to analyse governance quality across landscapes and tenure regimes. Multiple regression analysis is applied to determine the significance of underlying (e.g. governance) and direct drivers for deforestation. In another application, preferences of stakeholders for different policy instruments and their combinations are determined by means of principal component analysis in the three study countries. Social network analysis is used to quantify the power of individual stakeholders. Relations between preferences for policy instruments and power can form the basis for recommendations for individual instruments. Based on these examples it can be concluded that such reproducible and stochastic quantitative designs are needed to allow for generalization of results. However, specifically the formulation of research questions and the interpretation of results need a deep procedural understanding, e.g. resulting from qualitative research. This shows that a polarization between quantitative and qualitative approaches is neither useful nor intended.