

Linking equity, power and stakeholders' roles in relation to ecosystem services

Presenting author: Améline Vallet

Other authors: Bruno Locatelli; Harold Levrel; Nicolas Dendoncker; Cécile Barnaud; Yésica Quispe Condé

Primary affiliation: Ecologie Systématique Evolution, AgroParisTech, CNRS, Univ. Paris-Sud, Université Paris-Saclay, 91400, Orsay, France

The issues of power and equity are gaining attention in the research on ecosystem services (ES). Stakeholders who benefit from ES are not necessarily able or authorized to participate in ES management. We propose an analytical framework for identifying and qualifying stakeholders' roles in relation to ES flows. Building on existing frameworks in the ES literature, we specifically aim at unraveling the different direct and indirect management contributions to ES flows, and at linking them with ES benefits. We apply this framework to the Mariño watershed (Peru) to describe stakeholders' roles using a set of eight ES, and we discuss the implications of our findings in terms of equity and power. We conducted face-to-face semistructured interviews with representatives of 52 stakeholders of the watershed to understand how they managed ES and benefited from them. We used statistical analysis (permutation tests) to detect significant differences between stakeholder sectors (civil society, NGOs, business, public sector) and scales (from local to national levels). Indirect forms of ES management were more frequent than direct ones for all ES, and water quantity, water quality and agricultural production received the most management attention. The differences we observed between ES benefits and management could result from intentional choices (e.g. preferences for local benefits). We also found clear differences between those who managed ES and those who benefited from them. ES benefits were higher for local stakeholders and the business sector, while public organizations and NGOs were the most involved in ES management. These inequities reflected the different rights and capabilities of stakeholders to benefit from or participate in ES management. They also emanated from spatial and structural interdependences between stakeholders. Participatory governance of ES could offer solutions to enhance both distributive and procedural equity.

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