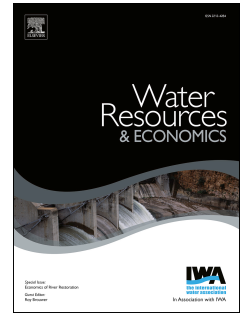


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# Contracts versus Trust for Transfers of Ecosystem Services: equity and efficiency in resource allocation and environmental provision

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Kenneth Broad, Amar Hamoudi and Renzo Taddei*

## Abstract (166 words)

Managing natural-resource allocation and environmental externalities is a challenge. Institutional designs are central when improving water quality for downstream users, for instance, and when reallocating water quantities including for climate adaptation. Views differ on which institutions are best: states; markets; or informal institutions. For transfers of ecosystem services, we compare informal trust-based institutions to enforced contracts, both being institutional types we observe commonly in the field. The trust-based institutions lack binding promises, thus ecosystem-services suppliers are unsure about the compensation they will receive for transferring services to users. We employ decision experiments given the shortcomings of the alternative methods for empirical study of institutions, as well as the limits on theoretical prediction about behaviors under trust. In our bargaining game that decouples equity and efficiency, we find that enforced contracts increased efficiency as well as all measures of equity. This informs the design of institutions to manage transfers of ecosystem services, as equity in surplus sharing is important in of itself and in permitting efficient allocation.

Keywords bargaining, trust, contracts, field experiment, water, natural resources

JEL C78, C93, Q2, Q25

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