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Economic Valuation of Access to Natural Resources in three South Caucasus National Park Areas

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Abstract

Because of its exceptional conservation value, the German Federal Ministry for Economic Cooperation and Development (BMZ) initiated a multi-year programme on transboundary national parks (NP) in the South Caucasus (Armenia/AR, Georgia/GE, Azerbaijan/AZ). Sheep and cattle herding on high altitude summer pastures is one of the most important income sources pressuring NPs and their buffer zones. In an interdisciplinary project on integrated conservation planning in the region, we conducted two twinned, transboundary case studies (Lake Arpi/AR-Javakheti/GE and Zaqatala/AZ-Lagodekhi/GE). Here we report on small farmer preferences in Lake Arpi, Javakheti and Lagodekhi for access to natural resources in and around the NPs as well as for training measures for income alternatives. Following qualitative interviews ($n=31$) and a quantitative pilot study ($n=120$) a choice experiment (CE) was administered ($n=3*100$; clustered random sample). The CE was overall highly significant ($P(\chi^2, 9 \text{ df}) < 0.0001$).

Regularly, households are allowed to collect plants and fuel wood for home consumption. Preferences for additional opportunities for commercial exploitation of these non-timber resources could not be found ($p = 0.133$) but a loss of current access is of major concern. To compensate for a potential loss of access for home consumption, respondents require, on average, a minimum payment of 12 % of their monthly income ($p = 0.001$; willingness-to-accept compensation: WTA). For each 1 % restriction of summer pasture area, WTA is 0.7 % of income ($p < 0.0001$). Training measures for bee-keeping ($p = 0.001$), cheese production ($p < 0.0001$), and tour guiding ($p < 0.0028$) are well-appreciated (positive willingness-to-pay, WTP); there are pronounced regional differences, though.

In view of the highly precarious economic situation of the population of the case study areas, we suggest that further restrictions of local land use (non-timber resources, summer pastures) in favour of conservation concerns need to account for the substantial associated economic losses. Buffer zone management should focus on regionally differentiated training measures that are able to increase local incomes.

Keywords: Buffer zone management, conservation planning, economic valuation, transboundary national parks