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## The implementation of ecological engineering in Tibet has strengthened the local human-policy-resource connection

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Facing the dual threats of climate and socio-economic changes, how the social-ecological systems (SES) in the Tibet Autonomous Region can seize the opportunity of ecological restoration to enhance the quality of the environment while improving the relationship between human and nature is of great significance to promote the regional sustainable development. Thus, regarding human as the key component, we used Ostrom's SES framework as an analytical foundation to analyze the impact of the implementation of ecological engineering on local human-policy-resource connection. We distributed questionnaires for local residents, distinguished experimental groups (EG, n=325) and control groups (CG, n=165), and used a network approach to construct indicators for assessing effectiveness of ecological engineering, including overall connectivity and evenness. Meanwhile, random forest regression was used to explore the background variables of the dominant connection and accordingly proposed subsequent directions for optimal governance. We found that interviewees in areas where ecological engineering was implemented had more positive perceptions of the importance of ecosystem services, the relationship between ecological conservation and well-being, attitudes toward ecological engineering, and the impact of measures. The overall connectivity and evenness of EG were significantly higher than that of CG. The implementation of ecological engineering enhanced the connection between local people and the environment, but caused some inconvenience to local residents' livelihoods. Besides, elevation and annual precipitation were the background variables that dominated the overall connectivity. The overall connectivity was lower in alpine steppes with elevation of around 4000 m and semi-arid areas with annual precipitation around 400-500 mm. The implementation of ecological engineering played a positive role in alleviating human-nature relationship in tensions and promoting collective governance of common pool resources, but the governance process still involved risks. Safeguarding and improving the residents' livelihoods and enhancing the regional weak SES coupling due to geographical constraints are the future directions for optimal governance.