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Research article

Financial and environmental impact analysis of developing common pasturelands

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Abstract

The present study analyzed environmental benefits and economic feasibility of developing pasturelands in Tonk district of Rajasthan, India. The project evaluation techniques such as internal rate of return, benefit-cost ratio, payback period and net present worth were used for assessing the financial viability. Quantification of the environmental benefit in term of carbon sequestration was done analysing total soil organic carbon concentration using isotopic mass spectrometer. Assuming project life of 7 years and discounting rate of interest 10.5 per cent, analysis showed that net present worth of the project was Rs.32.28 lakh and payback period was just 6 years. The internal rate of return of the project was 74 per cent and discounted benefit-cost ratio was 2.17. Carbon concentration in intervened pasture land was increased by ~10% over without intervened pastureland due to better development of grasses at top 15 cm of soil layer. Monetising carbon credit, additional benefit of $12.24 per ha was attained with pasture land development in the form of carbon credit.

Keywords: Economic feasibility, Environmental benefits, Pastureland, Rajasthan