



Analysis of Financial Performances and Environmental Sustainability of Coldwater Inland Fisheries in Sikkim Himalaya

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Abstract: This paper analyses the financial performances in terms of productivity and profitability indices and environmental sustainability with regards to maximum sustainable yield (MSY) through the application of the Gordon-Schaefer Model for the coldwater Primary Fishermen Cooperative Society (PFCS). The data was collected from secondary sources for the periods 2013-14 to 2018-19. The PFCS of Upper Sribadam, Maneybong-Sopakha and Mangshilla have performed better in financial management but there is a probability of threat of sustainability in the future because in some of the periods their actual yield surpasses the MSY. The PFCS like Upper Rimbik, Chujachen and Dalep have not been able to bring their financial performances up to the mark because they were more concerned for sustainability. Excessive extraction of fish from the water bodies for higher profit motive may lead to less availability for the coming generations. The estimated mean yield per unit of effort of the trout and carp fish was 116.84 kg/51m³ and 87 kg/51m³ water areas respectively. The MSY is equal to 202.814 kg/51m³ water areas for trout and 114.069 kg/51m³ water areas for carp. The study suggests that in aquaculture or fish farming, there should maintain equilibrium between financial benefits and environmental sustainability and the resource should be utilised on a sustainable basis.

Keywords: Coldwater fisheries, PFCS, Productivity, Profitability, Environmental sustainability
