

Viable coalitions in the commons

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It is well known that the lack of cooperation among agents harvesting a renewable resource is critical for its sustainable management. The present paper gives insights into the complex balance between coalition structures, resource states or dynamics and the agent heterogeneity necessary to avoid bio-economic collapses. A model bringing together coalition games and a viability approach is proposed to focus on the compatibility between bio-economic constraints and exploited common stock dynamics. The extent to which cooperation promotes sustainability is examined. Our results suggest that the stability of the grand coalition occurs for large enough stocks. By contrast, for lower levels of resources, the most efficient user plays the role of veto player.

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