

On the sustainability of a common property resource:

An implication from dynamic game theory

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Abstract

In his influential paper, “The Tragedy of the Commons,” Garrett Hardin (1968) concluded that freedom of the commons brings ruin to all. The dynamic game literature verifies that this ecologist’s pessimistic view is theoretically supported, but several counter examples have been found. In this study, we show that, under a set of standard assumptions in economics, any resource use, sustainable or unsustainable can be a consequence of a dynamic game involving a common property resource, as long as the path is induced by a Lipschitz continuous dynamical system. This result implies that there are many possibilities for the fate of the commons.