ABSTRACT

This paper studies a specific class of common-pool resources, whereby rivalry is not characterized by competition for the resource stock. Artesian aquifers have been identified as a typical example. We propose a dynamic model that take into account the specific features of such aquifer: water pressure, well yield, and the corresponding dynamics. We compare the socially optimal and the private exploitation of an open access aquifer. The comparison of these two equilibria allows us to highlight the existence of a pressure externality, while there is no stock externality. This externality results, in the long run, in an addition number of wells for a same water consumption, hence additional costs which call for public regulation.