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# A Review on Investigating the Relations between Water Harvesting and Water Conflicts

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**Abstract :** The importance of Water Harvesting (WH) as an effective mean to deal with water scarcity is universally recognized. The collection and storage of rainwater, floodwater or quick runoff and their conversion to productive uses can ensure water availability for domestic and agricultural use, enabling a lower exploitation of the aquifer, preventing erosion events and providing significant ecosystem services. At the same time, it has been proven that it can reduce the insurgence of water conflicts if supported by a cooperative process of planning and management. On the other hand, the construction of water harvesting structures changes the hydrological regime, affecting upstream-downstream dynamics and changing water allocation, often causing contentions. Furthermore, dynamics existing between water harvesting and water conflict are not properly investigated yet. Thus, objective of this study is to analyze the relations between water harvesting and the insurgence of water conflicts, providing a solid theoretical basis and foundations for future studies. Two search engines were selected in order to perform the study: Google Scholar and Scopus. Separate researches were conducted on the mutual influences between water conflicts and the four main water harvesting techniques: rooftop harvesting, surface harvesting, underground harvesting, runoff harvesting. Some of the aforementioned water harvesting techniques have been developed and implemented on scales ranging from the small, household-sided ones, to gargantuan dam systems. Instead of focusing on the collisions related to large-scale systems, this review is aimed to look for and collect examples of the effects that the implementation of small water harvesting systems has had on the access to the water resource and on water governance. The present research allowed to highlight that in the studies that have been conducted up to now, water harvesting, and in particular those structures that allow the collection and storage of water for domestic use, is usually recognized as a positive, palliative element during contentions. On the other hand, water harvesting can worsen and, in some cases, even generate conflicts for water management. This shows the necessity of studies that consider both benefits and negative influences of water harvesting, analyzing its role respectively as triggering or as mitigating factor of conflicting situations.

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