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## Review, mathematical representation and classification of preventive drought management measures

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In the context of proactive drought management plans, a key element consists of analyzing, selecting and allocating measures aimed at increasing resistance to droughts and reducing its potential impacts on the society, environment and economy. Currently, these measures, known as preventive drought management measures (Fatulová et al., 2015), are embedded within measures for flood management, catchment management plans, rural development plans, among others. This situation raises two issues. Firstly, information about potential preventive drought management measures (PDMM) is commonly fragmented and it is not a trivial task find or select measures that could be implemented as PDMM. Secondly, even though the same measure can be implemented from different management perspectives (Flood management, land degradation management, catchment management, rural development plans,) its applicability, advantages and limitations, may change according to the management perspective.

Considering the above, this study attempts to provide a review of PDMM that includes: measure description, applicability, limitations, mathematical representation (For further implementation in modelling systems) and classification, from a drought management perspective. It is worth to mention that this study is focused on hydrologically based measures, applicable for agricultural and hydrological drought management.

The research methodology is divided in three phases. The first phase consists of identifying drivers that trigger and/or enhance agricultural and hydrological droughts. This analysis is carried out from a hydrological angle, where land surface processes and human activities are potential drivers agricultural and hydrological droughts (Van Loon et al., 2016). The second phase examines an extensive list of technical documents, books, books sections, journal articles and case studies in order to identify those measures that could manage or mitigate the impact of potential drivers of agricultural and hydrological droughts. In this phase, PDMM are described in terms of applicability, advantages, limitations and mathematical representation for further implementation in modelling systems. Based on the analysis of the PDMM, the third phase of the study focusses on their classification, into three categories: nature-based solutions, grey infrastructure and changes in human water consumption