

Potential for Roof Rainwater Harvesting To Provide Cost Effective and Environmentally Sustainable Source Of Handwashing Water At Maasai Mara University

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Abstract

SDG 6 on water, sanitation and health can be considered as a cornerstone development goal that will enable achievement of other development milestones. The COVID-19 pandemic has provided an unprecedented environmental health shock that has demonstrated the central role of water in human health. The COVID-19 pandemic has brought about fundamental and perhaps irreversible shifts in human – environment interactions. This paradigm shift in the way humans interact with the natural environment has called for the need to develop innovative, low cost and environment friendly means of adapting to an increasingly changing bio – physical environment. The requirement of providing water for handwashing in institutions of learning is largely going to be a challenge to primary schools located in water scarce environments like Narok and that actually require more water since hand washing requirements for children is higher. Narok is an area prone to extreme weather events (EWEs) and roof rainwater harvesting (RWH) should provide a very sustainable source of water during the heavy rains. This appropriate technology can easily be adopted and replicated in similar scenarios. Maasai Mara University main campus is endowed with a vast capacity to provide water for the mandatory handwashing through roof rainwater harvesting. This potential largely remains untapped or not fully developed. This paper provides preliminary data and a discussion point on an ongoing project aimed at promoting roof rainwater harvesting at Maasai Mara University as a source of reliable, cost effective and environmentally sustainable source of handwashing water to combat spread of COVID-19 in this arid and semi arid (ASAL) landscape based on the principles of circular economy.

Key words: SDG 6, WASH, COVID-19, Roof rainwater harvesting, Maasai Mara University, Circular economy