| Title                         |  | Environmental determinants of rain harvesting and dew point in the southeastern region of Egypt, using remote sensing techniques |         |            |                                      |  |
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This paper presents what rain harvesting is, dew point and the goals it achieves, the paper also draws attention to the need to pay attention to the limited water resources in the south-eastern region of Egypt and the use of rain harvesting techniques and dew point in order to make the most of these important and limited water resources in sustainable development processes to make these population-free areas attractive for investment and settlements; The average annual rainfall on the entire Egyptian territory is about 8 billion m3, and the water flow is in the range of 1.8 billion m3. This helps to attract and harvest rainwater in both Sinai, the north coast and the Red Sea mountain range within 200-300 million m3/ years. Due to Egypt's long coastline on the Red Sea and concern for the sustainable development of these coastal areas, the provision of water resources is a guarantee of its security and sustainability.

The focus of this paper will be on harvesting running rainwater in the dry valleys that feed natural reservoirs where local populations are clustered, as well as the potential for dew point harvesting from the wettest coastal areas, where water-harvesting systems are used in areas whose average rainfall has more than 200 mm (7.9 inches) per year.

The study area represents the southeastern corner of the Eastern Desert to the Egyptian-Sudanese border with a latitude of 22°, and extends on the western side of the Red Sea coast from Wadi Abu Ghason in the north to Wadi Wikuri in the south, between latitudes 24° 28' 28" to 22° North, and between longitude 34° 15'35" to 36° 54' 44" East. The study area covers about 31255 km2 including 29215 km2 in Egyptian land represents 93.47% of the study area, while the proportion of Sudanese land was 6.53% of the study area

The total number of sewage in the region's basins was about 238,196, with 1403.77 million m3, with an annual average of 25.52 million m3; these are large quantities, which reflect the potentiality for groundwater.

In conclusion, we emphasize that rain harvests and dew points are a complementary source of water resources in the study area, and may be a permanent source of water and a drive of stability, especially in the small communities scattered in remote mountainous areas.

Keywords: Rain Harvest, Dew Point, Remote Sensing, Eastern Desert

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