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Flood Water Harvesting

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The aim of floodwater harvesting is to store flood water in artificial, closed ponds made of different materials. To this end, the Oshana water is pumped into the storage reservoirs with a motor pump at the height of the rainy season, when the water quality is at its best.

Improving water distribution, by putting in place water control structures, can allow better control of water and reduce erosion, water logging and other risks. Excess water can be used for groundwater replenishment by diversion onto land that can absorb the water. This technique can reduce the impact of later droughts by using the ground as a natural reservoir. Dividing the floodwater into smaller portions, and avoiding steep slopes where water can pick up speed, can help safely steer water. Rainwater harvesting (RWH) systems offer a number of advantages as an alternative water supply solution, not just in arid and semi-arid areas. These technologies can also help reduce the risk of flooding in metropolitan areas. The need of collecting rainwater to partially fulfil household water demand is now generally recognised since climate change and population growth are reducing the availability of water resources in many locations. Water harvesting methods were a vital part of the water supply system of many ancient settlements in the dry lands of the Mediterranean region and Western Asia. Various water harvesting techniques evolved during the Bronze Age or earlier, and some of these remain in use even today. Based on literature we give a brief overview and present a tentative. Installing rainwater harvesting (RWH) systems is a valuable and effective way to reduce the use of drinking water for home purposes, not only in arid and semi-arid areas, but also in other areas where water is scarce. Typhoons and heavy rains may cause flooding which, in turn, can potentially increase the transmission of water-borne diseases, or diseases transmitted through water contaminated with human or animal waste. These include typhoid fever, cholera, leptospirosis, and hepatitis A. These methods include planting vegetation to retain excess water, terrace slopes to reduce slope flow, and building alluviums (man-made channels to divert water from flooding), construction of dykes, dams, reservoirs or holding tanks to store extra water during flood periods. Nevertheless, in both rural and urban regions. Additional advantages of using these systems include the retention of floodwater from rainfall events and, as a result, the management of storm water flood volume. In the past, rainwater harvesting and domestic utilization have been very frequent practices in different parts of the world. Several studies have shown that widespread installation of RWH tanks in urban catchments can help reduce the frequency and peak of storm. water flooding. Water harvesting methods were a vital part of the water supply system of many ancient settlements in the dry lands of the Mediterranean region and Western Asia. Various water harvesting techniques evolved during the Bronze Age or earlier, and some of these remain in use even today. Based on literature we give a brief overview and present a tentative classification of these water harvesting methods and present the basic concepts behind these techniques supplemented with references to archaeological case studies. Floodwater harvesting is the process of storing floodwater in artificial, closed ponds built of various materials. At the height of the rainy season, when the water quality is at its greatest, Oshana water is pumped into the storage reservoirs with a motor pump. The pilot plant was built in Iipopo, a rural community in the southern Oshana area, in 2011 and 2012. The goal of this study was to assess and quantify the effectiveness of rainwater harvesting in reducing flood volume and, as a result, minimising urban waterlogging problems in a Palermo residential neighbourhood (Southern Italy). The introduction of RWH systems at the urban catchment scale has significant consequences for urban water management, according to the findings. The placement of RWH tanks in urban catchments has ramifications for the region that is inundated. When modest rainfall events occur, flooded regions can be reduced by up to 100%. A rainfall event with a depth of up to 50 mm can result in a 35 percent reduction in flooded area. For extreme rainfall events, the reduction in inundated area is insignificant. Conveyance devices concentrate and channel collected runoff from catchments to the storage facilities. Commonly they consist of bunds or canals and may be equipped with control devices such as sluice gates and distribution systems. Conveyance devices are often installed in larger catchments or on long hill slopes where runoff would otherwise be lostdue to infiltration or where the storage facilities are located at a great distance from the catchment. In small cultivated catchments conveyance devices are largely unnecessary asthe catchments adjoin the storage device. In floodwater harvesting deflectiondevices are built in wadi streams to tap occasional floods which were generated in remote catchments.

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