INTRODUCTION :-

* At the rate in which India population is increasing, it is said that India will surely replace China from its number 1 position of most densely populated country of the world after 20-30.
* These will lead to high rate of consumption of most valuable natural resource “water” is resulting in augmentation of pressures on the permitted freshwater resources.
* In order to conserve and meet our daily demand of water requirement, we need to think for alternative cost effective and relatively easier technological methods of conserving water.
* The collection and storage of rain, rather than allowing it to run off.

RAINWATER HARVESTING :-

* Rain water harvesting is a technology used for collecting and storing rainwater from roof tops, the land surface or rock catchments using simple techniques such as jars and pots as well as more complex techniques such underground check dams.
* Rainwater harvesting is the accumulation and deposition of rain water for reuse on site, rather than allowing it to run off.
* Rainwater harvesting is one of the simplest and oldest methods of self-supply of water for households, having been used in South Asia and other countries for many thousands of years.
* Installations can be designed for different scales including households, neighborhoods and communities and can also be designed to serve institutions such as schools, hospitals and other public facilities.

PROCESS :-

* The process includes the accumulation and deposition of rainwater for reuse onsite, rather than allowing it to run off.
* Rainwater can be accumulated from rivers or roofs, and in many places, the water is collected is redirected to a deep pit, a reservoir with percolation, or collected from dew or fog with nets other tools.
* It uses include water for gardens, livestock, irrigation, domestic use with proper treatment, indoor heating for houses etc.
* The harvested water can also be used as drinking water, long term storage etc.

USES OF RAINWATER HARVESTING :-

* Recharge underground water.
* Gardening.
* Livestock.
* For irrigation purpose.
* Flush toilets.
* Wash cars.
* Launder clothes.

ADVANTAGES :-

* Helps in reducing the water bill.
* Decreases the demand for water.
* Reduces the need for imported water.
* Promotes both water and energy conservation.
* Improves the quality and quantity of groundwater.
* Does not require a filtration system for landscape irrigation.
* It reduces soil erosion , stormwater runoff, flooding, and pollution of surface water with fertilizers , pesticides, metals and other sediments.

DISADVANTAGES :-

* Regular maintenance is required.
* Requires some technical skills for installation.
* Limited and no rainfall can limit the supply of rainwater.
* If not installed correctly, it may attract mosquitoes and other waterborne diseases.
* One of the significant drawbacks of the rainwater harvesting system is storage limits.

FACTORS AFFECTING :-

The factors affecting the amount of rainwater harvested are:

* Catchment features.
* Quantum of rainfall.
* The capacity of storage tanks.

METHODS OF RAINWATER HARVESTING :-

The different methods of rainwater harvesting include:

* Rooftop rainwater harvesting – The rooftop becomes the catchments, and the rainwater from the building and houses are collected.
* Surface runoff harvesting – It is the system that collects rain water, which flows away a surface run off .The run off rainwater is caught and used to recharge aquifers by adopting appropriate techniques.

IMPORTANCE :-

* Rainwater harvesting plays an important role in agriculture.
* Rainwater harvesting is a sustainable process that helps in preserving water for future needs.
* Water scarcity is a major concern in today’s scenario.
* The process of rainwater harvesting is a good way to conserve water.
* Thus, it is important to improve rain water harvesting through technical and financial prospects.

CONCLUSION :-

* Sustaining and recharging ground water along with the judicious use is need of an hour.
* One of the most logical step towards this is acknowledging about rain water harvesting.
* We have to catch water in every possible way and every possible place it falls.
* It can be concluded that rainwater , it conserved and utilized , can be an effective tool of replenishing ground water resources.