**ROTARY CLUB OF MORADABAD MID- TOWN – RID 3100**

**GLOBAL GRANT PROJECT TO INSTALL RAIN WATER HARVESTING SYSTEM**

Water is life. It is available in bounty yet it is limited. We need water for everything be it agriculture, industry or household. We need it everyday. But today, all across the globe, humans are not utilizing but exploiting water resources. The water table is going down, wells are being dug deeper and deeper to get water for irrigation, household, industrial and all other needs. The exploitation of Ground water is reaching alarming limits. Water is depleting fast and in every city the water table is going down creating all sorts of problems including environmental imbalances. It is said that the next World War would be for water. Recently, Capetown was without water and immediate steps were taken to stop any wastage of water.

We need to find a sustainable way to reduce depletion of water table, recharge the local acquifers, reduce urban flooding and mitigate climate changes. India receives a good amount of rainfall. There is a notion that rain water that falls/collects in the open grounds enriches the water table. In reality, most of it is only absorbed by soil, then a lot of water is lost due to evaporation and barely 5-10% reaches the water table. A good 50% of the total rain water gets mixed with the drain water and becomes unsuitable for human consumption. To get back clean water from the polluted water a lot of cost, time and effort has to be spent. However, if this rain water is stopped from running down the drains and is instead harvested, then it can be used for supporting the underground water table, this way we can definitely move the water shortage to a future date and support the recharge of Ground water table. Setting up Rain water harvesting units is a good way to recharge the ground water table.

The present Global Grant Project is to install 08 Rain Water Harvesting units in various cities of Rotary International District 3100. The cities comprising of RID 3100 fall in the western part of the State of Uttar Pradesh. Uttar Pradesh is one of most densely populated state of India and comes in the Northern territory of India. Due to its population, rampant industrialization and occupation of land for housing and other needs, the exploitation of Ground Water in UP is very high.

A report on State of Ground Water in Uttar Pradesh, as per survey by Water Aid, which was released in the year 2021 also forms basis of the grant. It details the present ground water position of various cities of UP and also the fact that a lot has been planned yet very less is visible. It states water exploitation and low water availability per capita over the years. Only 15% of rain water enriches the water table, 37.5% is run off to rivers and drains.

Under the Global Grant, 08 Rain Water Harvesting units shall be set up in educational Institutions, Temples and local bodies that have high daily usage of water and/or a sizeable constructed area and/or open ground. The Rain Water Harvesting System shall consist of a pit filled with natural materials like sand, gravel, silica sand and activated carbon. The water would be filtered through these natural materials and sent to underground first water table. A borewell upto first water table (preferably 100 feet) would be dug. Water from roof/field would be carried by water carrying pipes through gravitational force to the pit. A self propelling motor would send the water with pressure down the boring pipe @ 14000 liters of water per hour. A flow meter would record the amount of water harvested from the date of installation till the time of taking readings. This way precious rain water shall be used to enrich the underground water table. The maintenance or recurring cost of this system is less than USD 100 annually or practically NIL. The minimum quantity of rain water harvested would be around 5 million litres of water annually per site.

To increase awareness on the need of Rain water harvesting, the host club has decided on an ambitious task to set up rain water harvesting facilities in different cities/towns of Rotary International District 3100. The sites chosen are the ones where the footfall of the eminent residents of the city is good. This will enhance the Public Image of Rotary. The execution of project will be looked upon by Rotarians from Host Club.

**Which goals of area of focus i.e. Water, Sanitation and Hygiene will your project support?**

Improving water quality by protecting and maintaining surface- and groundwater resources, reducing pollution and contaminants, and promoting wastewater reuse

**Describe the community needs that your project will address.**

As already stated, everyone needs water. However, with the exponential growth the water resources are being exploited in serious proportions and availability of potable water is decreasing day by day due to depleting water tables. As per the studies conducted by Government of India, each of the city covered under this Global Grant is either has critical or over exploited water resources.

The project aims to support the water table by harvesting rain water and daily use water (in case of temples) so that rate of depletion gets reduced. The end result will be better availability of water to the community.

**How did your project team identify these needs?**

The Primary Host Contact has successfully completed rain water harvesting matching grants in the past. The units installed under the matching grants were appreciated by all the schools and some of the school managements replicated the idea in their other buildings. The news of water scarcity due to ground water depletion is not new. The efforts by Government to make people aware about the rain water harvesting are also not bearing fruits.

The Survey by Water Aid of 2021 also presented an alarming situation. Accordingly, the host committee conceptualized the project to harvest rain water and daily use water (wherever possible) to the first level of water table and identified what kind of institutions can be covered and how water can be harvested in various institutions.

It was decided that in case of institutions having large buildings all the roof top rain water would be harvested and in case of temples daily used water shall also be harvested alongwith rooftop rain water. The toilets shall not be connected to the system.

**How were members of the benefiting community involved in finding solutions?**

To spread awareness in various other cities of the district, the host committee floated its intention to apply for a GG on rain water harvesting inviting nominations from clubs of the eligible institutions/temples. Around 12 clubs responded and sent names of institutions. They were all contacted and the proposed site was discussed with the vendor. One site was rejected due to rocky terrain. Three clubs refused to participate as the institutions did not show any interest. A final tally of 08 units was then prepared. The clubs were then asked to hold meeting with the management committee of the institution. A community assessment survey form was also formulated for each kind of institution, which was filled during the meeting, detailing their problems and the problems faced by local community persons. The clubs sent the duly filled assessment survey form to the host committee alongwith photographs of the institution. The same were analysed by the host committee members in consultation with the vendor. Later, the vendor also visited the sites to check whether a sustainable unit can be installed in the premises.

**How were community members involved in planning the project?**

While filling the community assessment form local community members, wherever found necessary, were also asked the problems they are facing due to discharge of rain water from the institution and they were duly documented so that their problems are also addressed.

**Please explain. Are local initiatives not addressing these needs? Or, if they are, why did you decide not to work with them?**

The Central and State Governments, through their ministries, are asking people to conserve water but nonavailability of local personnel to guide in installing such units is not giving desired results. Studies are being conducted for assessing the Ground Water depletion, but the ground reality is not showing signs of improvement. Further, the government work is a time taking process. Working with them would have delayed the project. However, the proposed project would initiate the thought process among locals to opt for rain water harvesting.

**Please describe the training, community outreach, or educational programs this project will include.**

Since the project is fully automated and does not require any training for operating the harvesting units.

The installation of units would itself be a matter for improving Public Image and Community outreach of Rotary International and Rotary Foundation. Since the units would be installed in educational institutions, the students would get educated about the project. Few units are also being set up in temples, which will give a boost to public image of Rotary. We are hopeful that the harvesting Units would be model projects and create awareness on setting up viable units for harvesting water.

**How were these needs identified?**

Various news articles, Government researches, surveys helped in identifying the needs.

**List any community members or community groups that will oversee the continuation of the project after grant-funded activities conclude.**

The institutions have agreed for upkeep and maintenance of rain water harvesting units. Letters of consent are duly attached with the Community Assessment form. The vendor would visit the site annually or as and when any need arises. The motor, sensor and filters carry one year warranty. The units do not require any major funds for their running and maintenance once grant funded activities conclude.

**Budget for the Project**

Under the Grant 08 units are to be installed.

Each unit cost is Rs.3,00,000

Cost of setting up 08 units INR 24,00,000

Contingency INR 2,00,000

TOTAL COST of Project 26,00,000

Total Cost in USD (@1 USD = 76INR) 34,210

DDF Contribution by RID 3100 5,000

TRF Match 4,000

Cash Contribution RID 5870 10,000

Shortfall in Funding 15,200