

## “Attitude Of Students Towards Rainwater Harvesting”

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**Abstract:** Water is the main source for the development for all human beings, cattles and industries. From the history of the global system, we learn that in ancient days, perennial rivers become the major source of water and the people, who were far away from the river sources, practiced the utilization of ground water and stored rain water for their future purpose. In India ground water utilization has been practiced since many centuries. But at present, because of excess population and industrial developments the ground water is exploited to a great extent. Rain water harvesting is the technique of collection and storage of rain water in surface or in under-ground aquifers before it is lost as surface run-off. Artificial recharge to ground water is a process by which the ground water reservoir is augmented at a rate exceeding that under natural conditions of replenishment. Therefore, the investigator attempted to study the attitude of students towards RWH and found a favorable attitude.

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### I. Introduction

Efficient planning and management of water sources for irrigation, industrial and other uses is an important aspect for the development of any system. Recognition of the fact that ground water and surface water are not separate entities but they are two forms of the same total water source, leads to the recognition of the importance of conjunctive water use in the management of ground water and surface water system. Although the land intended for recharging, the surface water is wasted as run-off into the sea whereas ground water table depletes to an alarming level. This in turn results in the reduction in well yield, drying up of shallow wells, deterioration of water quality, and sea water intrusion into the coastal aquifers, increased energy required and uneconomical to poor farmers to continue agriculture. Further, many of the agricultural fertile lands have become barren in coastal area like Minjur (Thiruvallur District) Kuttam, Athisayapuram in Thoothukudi, Nagapattinam and Tiruvarur District of Tamilnadu. Further about 89 blocks have been identified as overexploited and dark blocks where the balance available ground water potential shows a negative sign. In order to check this disturbing trend, the rain water is to be conserved. The Bhoomijal Samvardhan Puraskar and National Water Award have been launched with an objective to encourage the Non-Governmental Organizations (NGOs) /Gram Panchayats/ Urban Local Bodies (for population up to 1 lakh) for adopting innovative practices of ground water augmentation by rainwater harvesting and artificial recharge through people's participation in the targeted areas resulting in ensuring the sustainability of ground water resources and development of adequate capacity amongst the stakeholders.

### Statement of the problem

The problem selected for the present study is to measure the “Attitude of Students towards Rain Water Harvesting (RWH)”.

### Objectives

- i. To find out the students’ attitude towards rain water harvesting.
  - ii. To find out the attitude of the following students towards rain water harvesting.
    - i. Boys
    - ii. Girls
  - iii. Students studying in XI standard
  - iv. Students studying in IX standard
  - v. Students living in rural area.
  - vi. Students living in urban area.
  - vii. Students living in own houses.
  - viii. Students living in the rental houses.
  - ix. Students living in the concrete houses.
  - x. Students in the tiled houses.
  - xi. Students living in thatched houses.
  - xii. Students living in the houses with well facilities,
  - xiii. Students living in the houses without well facilities,
- iii) To find out the difference if any between the following students in their attitude towards rain water harvesting.

- a) Gender – boys- girls
- b) Standard – IX std. & XI std.
- c) Location of their residence – rural – urban
- d) Ownership of houses – owned – rental
- e) Types of houses – concrete – tiled – thatched
- f) Houses with well facilities – without well facilities

### **Hypotheses**

1. The student attitude towards rain water harvesting is favorable.
2. The attitude towards RWA of the following students are favorable
  - a) Gender – boys and girls.
  - b) Standard IX std XI std.
  - c) Location of that residence – rural – urban
  - d) Ownership of houses – owned – rental
  - e) e). Types of houses – concrete – tiled – thatched
  - f) Houses with well facilities –without well facilities
3. There is a significant difference between the following students on their attitude towards RWH
  - A) Gender – boys and girls.
  - B) Standard IX std XI std.
  - C) Location of their residence – rural – urban
  - D) Ownership of houses – owned – rental
  - E) Types of houses – concrete – tiled – thatched
  - F) Houses with well facilities – without – well facilities

### **Method of the Study**

The descriptive survey method is used for the present study as it is the most suitable method to study the present problem.

### **The sample of the study**

In the present study the students studying in different schools were taken as the sample. The size of the sample was 200. The random sampling technique is used.

### **Tools used in the study**

The investigator constructed and validated the tool to measure “The attitude towards rain water harvesting under likert type. The investigators used the general data sheets to collect other details of the sample.

### **Description of the Tool**

The tool used for the present study is constructed by the investigators in Tamil version and consists of 24 items. Based on the item analysis and selection, 24 items were selected for the final study from 51 items used for the pilot study. The tool for final study consists of 24 items both with positive and negative statements. It is the likert- type scale with five categories strongly agree (SA) agree (A) undecided (V) disagree (D) and strongly disagree (SD) .

### **Scoring procedure**

Scoring was done based on the responses of the samples for each item of the scale to measure the attitude towards rain water harvesting. The respondents were requested to place a tick mark against one of the responses [Strongly agree, Agree, Undecided, Disagree, and Strongly disagree]. In the case of positive items strongly agree gets ‘5’, weightage, agree gets ‘4’, undecided gets ‘3’, disagree gets ‘2’, and highly disagree gets 1 weightage and in the case of negative statements the scoring procedure is just reverse. There are 24 items in the tool; therefore, one can get the maximum score of 120 for the tool.

### **Delimitation of the study**

1. The study is restricted to students studying in the IX standard and XI standard only.
2. The study is limited to Udumalpet town only.
3. The study can be generalized for state level after conducting a few similar researches in other parts of Tamilnadu.

**Major findings**

1. The school students have a favorable attitude towards rain water harvesting.
2. The boys and girls students studying in IX standard and XI standard, students residing in rural and urban areas and students living in owned houses and rental houses have a favorable attitude towards RWH.
3. It is found that there is no significant difference between the following students with reference their attitude towards rain water harvesting.
  - a. Gender – boys and girls
  - b. Standard IX std & XI std.
  - c. Location of their residence – rural & urban
  - d. Ownership of houses -owned – rental
  - e. Type of houses- concrete – tiled- thatched
  - f. Houses with well facilities – without well facilities.

**Table 1**  
**Table showing the mean values for Attitude towards Rain Water Harvesting**

| No. | Categories        | Variable     | N   | Mean  | S.D.  |
|-----|-------------------|--------------|-----|-------|-------|
| 1   |                   | Whole sample | 200 | 86.64 | 16.90 |
| 2   | Gender            | Boys         | 112 | 87.63 | 16.54 |
|     |                   | Girls        | 88  | 85.39 | 17.36 |
| 3   | Standard          | XI           | 108 | 86.31 | 18.57 |
|     |                   | IX           | 92  | 87.02 | 14.80 |
| 4   | Residence         | Urban        | 98  | 84.96 | 20.46 |
|     |                   | Rural        | 102 | 88.25 | 12.47 |
| 5   | House ownership   | Owned        | 156 | 87.05 | 17.48 |
|     |                   | Rental       | 44  | 85.18 | 14.74 |
| 6   | House type        | Concrete     | 98  | 85.53 | 17.89 |
|     |                   | Tiled        | 60  | 87.83 | 17.74 |
|     |                   | Thatched     | 42  | 87.57 | 13.09 |
| 7   | Existence of well | Yes          | 24  | 85.83 | 10.25 |
|     |                   | No           | 176 | 86.75 | 17.63 |

**Table 2**  
**Table Showing the ‘t’ values for Attitude towards Rain water Harvesting**

| No | Categories        | Descriptive on | N   | M     | S.D.   | S.E   | T     | S    | S/NS |
|----|-------------------|----------------|-----|-------|--------|-------|-------|------|------|
| 1  | Gender            | Boys           | 112 | 87.63 | 16.54  | 1.56  | .92   | 0.01 | N.S  |
|    |                   | Girls          | 88  | 85.39 | 17.36  | 1.85  |       |      |      |
| 2  | Standard          | XI             | 108 | 86.31 | 18.57  | 1.786 | 0.299 | 0.01 | N.S  |
|    |                   | IX             | 92  | 87.02 | 14.20  | 1.542 |       |      |      |
| 3  | Residence         | Urban          | 98  | 84.96 | 20.46  | 2.06  | 1.369 | 0.01 | N.S  |
|    |                   | Rural          | 102 | 88.25 | 12.47  | 1.23  |       |      |      |
| 4  | Type of house     | Concrete       | 98  | 85.53 | 17.89  | 1.807 | .789  | 0.01 | N.S  |
|    |                   | Tiled          | 60  | 87.87 | 17.74  | 2.290 |       |      |      |
| 5  | Type of house     | Concrete       | 98  | 85.53 | 17.894 | 1.807 | .732  | 0.1  | N.S  |
|    |                   | Thatched       | 42  | 87.52 | 13.038 | 2.011 |       |      |      |
| 6  | Type of house     | Owned house    | 156 | 87.05 | 17.483 | 1.395 | 0.712 | 0.01 | N.S  |
|    |                   | Rental house   | 44  | 85.18 | 14.743 | 2.222 |       |      |      |
| 7  | Well in the house | Yes            | 24  | 85.83 | 10.25  | 2.09  | .370  | 0.01 | N.S  |
|    |                   | No             | 176 | 86.75 | 17.62  | 1.32  |       |      |      |

N.S = Not significant

**II. Conclusion**

Based on the findings of the present study, the following conclusions can be drawn.

- (i) Students in general got a highly favorable attitude towards rain water harvesting, which may be due to the realization of the importance of storing water. Moreover, people in general are suffering a lot for water which would have necessitated them in developing a favorable attitude towards the rain water harvesting.
- (ii) Students irrespective of their gender, standard of study, place of residence and types of house, got a favorable attitude towards rain water harvesting. This undifferentiated favorable attitude of students towards rain water harvesting may be due to the common ambition of all the students to save water to face water crisis.
- (iii) Another interesting finding reveals that both the students living in the houses with well facilities and those without well facilities are having a favorable and high attitude towards rainwater harvesting. This reveals that everyone knows the importance of saving water and every one realized the importance of rain water harvesting.

### **III. Recommendation**

- (i) The rain water harvesting movement introduced by the Government of Tamil Nadu is a successful endeavour with long term plan. It is tuned as people’s movement. Therefore, this success story can be included as one of the lessons in the school curriculum.
- (ii) Rain water harvesting network at public places can be established and maintained at every village, town and city involving school students, teachers, local leaders and government officials
- (iii) Students can be involved in any follow up programme on the rain water harvesting.

### **IV. Suggestion for the further study**

1. A similar study can be conducted at other places of Tamilnadu taking students as the sample for the generalization of findings.
2. A study can be undertaken by taking college students and general public as the samples.
3. A study can be conducted on the participation and follow up activities of the school students on the movement of rain water harvesting.

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