

# **ANNUAL REPORT 2021**



**Water and Environment Development Organisation  
(WEDO), NGO, Kozhikode, Kerala, India**

**January 2022**

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**Name of the NGO:** Water and Environment Development Organization (WEDO)

**Address:** 28 / 566, Poornima, Ayyappa Nagar, Chevayur, Kozhikode - 673 017 Kerala State, India

**Details of Registration:** Reg. No. KKD / CA / 1074 / 2015 Dated 15-12-2015 of the Registrar of Society, Dept. of Registration, Kozhikode, Kerala. Renewed during the period 2016-2021.

## **Office Bearers**

President: Dr. K. Madhava Chandran

Vice President: Sri. T. Valsan

Secretary: Sreevallabhan, S.

Joint Secretary: Sri. V. Aravindakshan

Treasurer: Sri. V. Radhakrishnan

## **Executive Members:**

Sri. E. Balakrishnan Nair

Sri. Jayaprasaad. K. M.

Sri. V. Sundararajan

## **Objectives**

The main objectives of WEDO are to promote water conservation, development and management programs for ensuring adequate water of good quality for people. Awareness programs, rain water harvesting, water management for domestic / agricultural purposes, water purification, establishment and maintenance of water storage / conveyance structures, providing water literacy for children, skill development training on water resources development / management etc. are envisaged for realizing this objective

Other objectives include promotion of sustainable organic farming, scientific environment friendly natural resources management, forestry development, scientific waste management, generation of data bank on water and other natural resources, promotion of physical and mental development of children, providing assistance to poor for treatment of chronic ailments, promoting voluntary blood donation, women empowerment programs, development of public consciousness on social evils like drug abuse, alcoholism, AIDS etc., promotion of HRD and institution building programs, provision of health awareness programs, promotion of Yoga, Meditation, Art of living and other mind-body relaxation techniques etc.

### **Activities undertaken**

Following were the activities undertaken by WEDO in 2021:

#### **1. Punjab and Sind bank funded project on Demonstration of artificial well recharge in water scarce panchayaths of Ernakulam District**

The well recharging system, which uses rain water falling on the terrace of the house located in the plot / sheets installed on the roof of the house was installed in the four plots in Ernakulam District during February 2021 (Details given in Table 1).

Display boards showing the project details, including the Logo and name of the Bank (as approved by the Bank) were fixed in all the plots in such a manner that they were visible from the road passing by the plots. The photographs of the well recharging unit installed in the demonstration plots and the display board fixed in a demonstration plot are shown in Plate 1 to Plate 4.

Table 1. Details of the artificial well recharging technique demonstration plots

Sl. No.	Details of the demonstration plots where artificial well recharging system was installed	Contact No. of the plot owner
1.	Mr. N. T. George Nedumthadathil House East Maradi Muvattupuzha Ernakulam District	+91 9946534196 / +91 9946142796
2.	Mr. A. V. Kurian Aasarukudiyil Manjeripadi Muvattupuzha Ernakulam District	+91 9895372707
3.	Mr. A. P. George Ailapurath House Ezhakkaranad via Puthenkurishu Ernakulam District	+91 9447444420
4.	Mr. T.V. Anilkumar Thekkeparambil 49/218 RSAC Road Near Vyttila underpass Ernakulam District (in Kochi Corporation)	+91 9847895212



Plate 1. Artificial well recharging technique demonstration plot established under the project at East Maradi, Muvattupuzha, Ernakulam District



Plate 2. Artificial well recharging technique demonstration plot established under the project at Manjeripadi, Muvattupuzha, Ernakulam District





Plate 3. Artificial well recharging technique demonstration plot established under the project at Ezhakkaranad, Ernakulam District



Plate 4. Artificial well recharging technique demonstration plot established under the project at Vytilla, Ernakulam District

The demonstration plot owners were requested by WEDO to inform as many people as possible about the well recharging system installed in their plots for creating awareness among them. They also mentioned about people visiting their plots to observe the well recharging unit and about them appreciating Punjab and Sind Bank for funding such a demonstration project on a socially relevant scientific water conservation practice. Some of them reportedly enquired with the plot owners about the branch of the Bank located in Ernakulam City.

## **2. Research project on Analysis of Mental Stress due to the COVID-19 Pandemic**

This research project was undertaken by WEDO for Chaitanya Global Chaitanya Yuva Kendra under the Chaitanya Global Foundation, Banaglore, Karnataka (Affiliated to Nehru Yuva Kendra, Bengaluru Urban, Ministry of Youth Affairs and Sports, Govt. of India).

The objectives of the project were

1. To analyse the pre-yoga mental stress of the participants of the yoga training due to the 2020 wave of COVID-19
2. To find out the effect of yoga training on the overall stress reduction of the participants

During the on-line registration for the 14 days yoga training programme conducted by Chaitanya Global Foundation, Bangalore in May 2021, in association with WEDO and other institutions, data was collected from the registering individuals on their mental stress due to the first wave of COVID-19 which happened during 2020. For this, items and responses included in the COVID Stress Scale (Steven Taylor et al, 2020) were used with Likert scoring. The sum of scores of the mental stress items was worked out as the total mental stress score of the respondent.

The maximum possible stress score considered in the study based on the responses to 11 COVID-19 related stress items is 49. This is the bench mark stress score considered under the study. This score will be obtained by a respondent only if he/she gives the maximum possible positive response, namely, "Not at all" for 8 mental stress

items and “Never” for the remaining 3 items. Hence, a respondent getting the total mental stress score of 49 can be considered to be having no stress due to COVID-19 first wave of 2020. The level of stress of the respondents (in %) was worked out by subtracting his / her total mental stress score from the bench mark value of 49 (which is the score for “No Stress”), dividing it by 49, and then, multiplying with 100.

The data was interpreted as scores and proportions. Statistical analysis was carried out using ANOVA and *t* test. Out of 312 people who registered for the yoga training in different languages, a sample of 300 were considered as respondents under this study.

The study has revealed the following:

- Majority of the respondents have either no worry / difficulty or have only slight worry / difficulty with regard to the 2020 COVID-19 related mental stress items analysed under this study.
- 69.4 % respondents have less than 25 % mental stress only due to the COVID-19 first wave 2020. Among them, 7.3 % respondents report no stress.
- Statistically significant difference exists in the stress score between different levels of mental stress, substantiating the difference in stress experienced by the respondents.
- More people in the age group of 20-40 years have experienced the highest level of stress due to the first COVID-19 wave 2020, when compared to the higher age groups. This is further established by the statistical significance of the difference in mental score between the age groups.
- Even though more females have the highest level of stress than males, there is no statistically significant difference in stress scores between them
- There is not much difference in the proportion of married and single individuals who have experienced the highest level of stress. However, none of the widowers, who could be more insecure than married and single individuals, have experienced the highest level of stress.
- Andhra Pradesh is the State with respondents having the minimum amount of stress due to the 2020 COVID-19 wave, while stress is the maximum for the people from Odisha.



- The average level of stress of people from Kerala, Karnataka, Tamil Nadu, Telangana, Maharashtra, Rajasthan, Chhattisgarh and UP are only about 18 % with respect to the bench mark condition of “No stress”.
- ANOVA test shows statistically significant difference in the total mental stress score of the respondents from various States
- About 69% people report less than 25 % stress during the COVID first wave of 2020.
- 84 % people report moderate stress and 16 % report very much of mental stress due to the second COVID-19 wave 2021
- About 62 % of respondents reported extremely good change and 29 % reported moderate change in stress due to the yoga training provided to them under the initiative of Chaitanya Global Foundation, Bangalore during May 2021, highlighting the effect of even a short period of yoga practice on mental health improvement.

The Project Completion Report was submitted to Chaitanya Global Foundation, Bangalore (WEDO, 2021. Analysis of Mental Stress due to the COVID-19 Pandemic. *Project Completion Report*, Water and Environment Development Organisation, July 2021: 26p.)

Based on the results of the project, the following research paper was published on behalf of WEDO:

Madhava Chandran, K., Naveena, K, Valsan. T. and Sreevallabhan, S (2021). Analysis of the Mental State of People on COVID-19 Pandemic. *International Journal of Indian Psychology*, 9(4): 839-846. DIP: 18.01.082.20210904, DOI:10.25215/0904.082

### **3. Other Publications**

Based on other studies carried out by WEDO, the following papers were also published during 2021:

Madhava Chandran, K., Naveena, K., Vijayaraghavan, N., Valsan, T. and Sreevallabhan, S (2021). Effect of yoga practice on psychological and physical health parameters. *International Journal of Yoga and Allied Science* 10 (2), July-Dec 2021: 105-113.

5. Madhava Chandran, K., Naveena, K., Valsan, T. and Vijayaraghavan, N (2021). Influence of Meditation on the Wellbeing of People during the Covid-19 Pandemic. *Pacific International Journal*, 4(2): 52-58. DOI: 10.55014/pij.v4i2.14 <https://rclss.com/index.php/pij>

6. Madhava Chandran, K. and Sangeeth, B (2021). Effect of Yoga Practice on Stress Relief. *Sathra- The Indian J. Sci. & Technol.*, 2021, 2 (3): 49-52.