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WATER AND ENVIRONMENT DEVELOPMENT ORGANIZATION (WEDO)

KOZHIKODE

KERALA, INDIA

JANUARY 2020

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 2016-2019

Office Bearers

President: Dr. George Mammen
Vice President: Sri. T. Valsan
Secretary: Sri. M.T Anilkumar
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

The following activities were undertaken by WEDO during 2019:

Wick method of irrigation for vegetables

Wick irrigation is a micro irrigation technique for indoor and outdoor cultivation, which has been reported to save water and nutrients, according to studies conducted by the Centre for Water Resources Development & Management (CWRDM), Kozhikode, Kerala. It works on the principle of capillary action to bring water from the source to the soil based on the reduction in soil moisture. Wick made by folding glass wool in a piece of plastic net of 30 cm length and 20mm width/ diameter is inserted through a hole at the bottom of the grow bag. Half of its length goes up inside the grow bag up to the surface of the soil and the rest is inserted into the water source(3'' PVC pipe). 20mm diameter holes are drilled at 50cm interval on the PVC pipe. One end of the network of PVC pipes is closed with an end cap. On the other end of the network, a vertical PVC pipe of 1 M height is connected for filling water whenever necessary. Grow bags for planting the crop are filled with potting mixture after keeping the wick in the centre of the bag. The other end of the wick is inserted into the holedrilled on the PVC pipe. Bricks are used for supporting the grow bags. When the moisture content of the soil in the grow bag reduces, the wick supplies water to the soil through capillarity.

WEDO was involved in the demonstration of wick method of irrigation in farmers' plots for vegetables in Kozhikode district during 2018. This was continued during 2019 for Tomato, Bhindi and Chillies. Fermented Neem cake, fermented Neem cake + FYM, Fish Amino acid, Cow dung fermented Amirthpani (cow dung + fresh cow urine + Honey + Ghee) and humic acid were applied as organic manureat weekly interval in the wick plots. Data on crop yield was collected and water use efficiency of vegetables under conventional irrigation and wick irrigation were worked out.Both

these parameters showed higher values under wick irrigation than the conventional irrigation method (Table 1). During 2018 also, wick irrigation for vegetables in a demonstration plot of WEDO showed yield increase in the range of 68 to 86 % for vegetables, when compared to the conventional irrigation method.

Table 1. Yield and water use efficiency of vegetables under conventional irrigation and wick irrigation during 2019

C- Conventional irrigation

W-Wick irrigation

	Number of pods / plant		Average yield (gm / plant)		Total quantity of irrigation water used per plant during the crop growth period (litres)		Water use efficiency (Crop yield in gm / plant per litre of water used)	
Crop	C	W	C	W	C	W	C	W
Tomato	10.3	14.7	333.3	620.7	499.2	78.0	0.7	7.9
Chillies	22.7	35.3	65.9	110.4	435.2	68.0	0.2	1.6
Bhindi	50.0	75.0	952.2	1736.8	550.4	86.0	1.7	20.2

Wick irrigation plot

Demonstration of soil and water conservation measures

Associated with CWRDM, Kozhikode in continuation of the demonstration on various soil and water conservation measures laid out during 2018 in a plot near St. Joseph's Devagiri College, Kozhikode.

Demonstration plot of soil and water conservation measures

Coir geo-textile laid out as a soil conservation measure in the demonstration plot

Husk burial in coconut basinin the demonstration plot for moisture conservation

Silt pit in the demonstration plotfor ground water recharge

Mulching using dry leaves for moisture conservation in the coconut basin in the demonstration plot

Evaluation of watershed development program

Based on the request from CWRDM, Kozhikode, WEDO carried out the impact assessment of Urgattiri Kolarthod watershed implemented under IWMP in Malappuram district and prepared the report (Valsan, T., Sreevallabhan, S., Anil Kumar, M.T., Sundararajan, V, and Beeran, M, 2019. Impact assessment of Urgattiri Kolarthod watershed implemented in Malappuram district under IWMP. *Final Report*, WEDO, March 2019. 21p.)

Project proposal on demonstration and awareness creation on artificial well recharging technique in selected water scarce panchayaths of Ernakulam district

Based on the proposal submitted by WEDO to Punjab &Sind Bank, New Delhi, the project entitled “Demonstration and awareness creation on artificial well recharging technique in selected water scarce panchayaths of Ernakulam district” was sanctioned under the CSR funds of the Bank. The project is envisaged to be implemented during 2020-2021

Project proposal ontraining of field level functionaries on ground water recharge through roof top water harvesting

Based on a request from Bharath Sevak Samaj (BSS), Thiruvananthapuram unit, WEDO submitted a proposal for training of field level functionaries on ground water recharge through roof top water harvesting to be implemented by BSS using the expertise of WEDO. The proposal was submitted by BSS to Govt. of Kerala for funding

Training for farmers

WEDO was associated with CWRDM, Kozhikode in conducting two Ministry of Water Resources, Govt. of India sponsored National level Training on On-farm water management and Participatory Irrigation Management (PIM)for the office bearers of water users' associations / padashekhara samithis from various districts ofKerala. The Vice President of WEDO, Sri.Valsan, T. Senior Technical Officer (Retd.), CWRDM was involved in handling classes and field visits / diagnostic analysis for the trainees in the command areas of famer managed minor irrigation systems