

Annual Report

2019-20



Water and Livelihood Foundation

12-13-451, Street no.1, Tarnaka
Secunderabad, India

Ph: 040 27014467, e-mail: wlfoundation@outlook.com

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1. About WLF

Water and Livelihoods Foundation (WLF) is a non-profit public Trust, without affiliation to any political party and is secular in character. The Trust emerged on 16 June 2016 in the context growing water scarcity in India and has the vision of striving towards a water-secured society. WLF promotes water resources conservation and management addressed towards betterment of livelihoods of poor and needy in rural and urban areas.

Towards achieving its vision, WLF focusses on development and field testing of innovative technologies for the benefit of farmers; action studies on topics of importance to rural livelihoods and skill building for development professionals. WLF also started contributing to the water conservation and efficient use in Urban as well as Industrial sectors in India. Particularly, enhancing community participation in augmenting ground water and reducing wastage of drinking water are major areas of work in Urban areas.

1.1. Vision of WLF

Vision of the organization is 'Realizing a water-secure society by facilitating interdisciplinary convergence of hydrological and social sciences at the grass-roots benefiting the poor and marginalized communities. WLF strives to achieve its vision through its activities and programs.

1.2. Objectives of WLF

Following are the three specific objectives of WLF:

- Achieving water security and livelihoods enhancement of poor through community development initiatives, action studies and innovating better water, sanitation, irrigation and agricultural technologies and processes that helps in better water harvesting, recharge, efficient use of resources, reducing environmental pollution, improves farm productivity and ultimately enhances incomes to farmers and people in general.
- Education, skill development, dissemination and capacity building activities for human resources in CBOs, grass-roots NGOs, their networks, Government staff, local bodies, children and youth for improving knowledge, behavioral change, better productivity in their work, skill enhancement, livelihoods and career development
- Collaborate with other civil society organizations, farmers associations, mutually-aided cooperative societies and cooperative societies; strengthen their capacities in water management and sustainable livelihoods and facilitate network programs on issues and themes around water management and livelihoods

2. Governance and Financial Management

The apex governance structure in the organization is the Board of Trustees (BoT). The key functionaries of the organization include three Trustees (including the Chairperson) and the Chief Functionary, who is also the ex-officio member of the Board. The BoT meets at least once a year and discusses on various policy matters and program priorities of the organization. The table no 01 shown the details of the three Trustees and Chief Functionary of Water and Livelihoods Foundation:

Table 1: Details of the Trustees

1.	Udayashankar Chaturvedula	Chairperson	Development worker
2.	Sreekumar Nhalur	Trustee	Social Work
3.	Someshwer Rao Vanaparathi	Trustee	Finance sector expert
4.	Venkata Ramamohan Ramachandrula	Chief Functionary	Social Work (Employee of WLF)

2.1. Policies and guidelines

WLF has developed and adopted a bouquet of operational policies such as Gender policy, Conflict of Interest Policy, Finance Manual, Common Cost Policy, Program guidelines and HRDM manual. All these policies and guidelines together form the “Team Manual” of WLF and guide all its operations.

Core values of the Organization:

The organization has few Core values which it would not compromise on:

- Non-discrimination
- Gender Equity
- Inclusive approach
- Eco-friendly approaches
- Transparency

Each of these values is elaborated in the Program Guidelines, which is also available on the organizational website (<https://www.wlffoundation.net/governance.html>).

2.2. BOT meetings and major policy outcomes

WLF conducted one Board of Trustees (BoT) meeting during the reporting year (April 2019 to Mar 2020) on 18th May 2019 and discussed various actions to be done by the Trust during the year. Following are the major areas of BoT discussions and decisions:

- a) Progress sharing and achievements of the year 2018-19 and plan for the year 2019-20
- b) Discussed and approved various financial reports and activity reports of previous year (2018-19)

- c) Focusing on capacity building, grass-roots actions and collaborations with like-minded organizations
- d) Application of Registration under FCRA with FCRA division of Ministry of Home affairs, Government of India
- e) Transfer of part of the income to reserves to meet future needs
- f) Application to Income Tax department for registration under section 80G
- g) Collaborations with SACH (New Delhi), Wassan (Hyderabad) and ICLEI (New Delhi) for various water supply, conservation and urban flood mitigation initiatives
- h) Appointment of statutory auditor for WLF
- i) Resolution for continuation of Trustees and Mr. Udayshankar as chairperson for WLF
- j) Finalization of draft Common Cost Policy for WLF

2.3. Financial systems and sources of funds

A well-laid out finance manual and rules are in place in the organization. Accounts are maintained on fund-based accounting practice with cash-based expenditure booking system. All the accounts are maintained in the Tally ERP 9 software and all the required physical records of income and expenditure are maintained and updated periodically.

Both the local and designated FC bank accounts are with the Bank of Baroda, Tarnaka Branch, Secunderabad, India. WLF obtained 12A registration certificate from Income Tax Dept. with URN: AAATW4026G/07/16-17/T-1399 with effect from 16th June 2016. WLF has got PAN: AAATW4026G and TAN: HYDW01203G numbers.

WLF applied for registration under Foreign Contribution Regulation Act (FCRA) on 07th Sept 2019 to the Ministry of Home Affairs. Also, during the year, WLF applied for registration under Section 80G of Income Tax Act to provide the tax exemption to the donors for donations to WLF.

WLF mobilized financial resources for its charitable activities through grants, donations and small technical support services during 2019-20. Funds mobilized were spent primarily on the activities that contribute to achieving its major objectives, viz., water security, capacity building and livelihoods improvement of poor and small, marginal farmers in its operational areas. Details of income-expenditure and balance sheet of the organization are presented separately in the annual audited financial statements.

3. Projects and Activities

To realize its vision and objectives, the organization undertakes various programs, activities and projects which fall under three broad categories:

- Sustainable water management and livelihoods
- Capacity building and collaborations with other organizations
- Documentation and publications on learnings of the organization

Various initiatives and projects undertaken so far under the above sections are mentioned below, a description of which is given in the following sections of this report:

- 3.1. Design of rural water supply systems in Jharsuguda, Odisha
- 3.2. Promotion of vegetable cultivation in Trellis (*Pandals*) in Andhra Pradesh & Telangana states
- 3.3. Energy interventions by WLF
- 3.4. Trainings & meetings by WLF
- 3.5. Guidance on rainwater harvesting and recharge
- 3.6. Publication and dissemination of knowledge by WLF
- 3.7. Collaborations and other meetings

3.1. Design of rural water supply systems in Jharsuguda, Odisha

WLF received grant support from SACH, New Delhi for providing technical support in design of safe water supply systems in tribal areas in Lakhanpur block, Jharsuguda dt., Odisha. SACH was assigned the task of providing water supply and individual sanitary latrines to 22 habitations (around 1800 families) in Lakhanpur block by Ib Thermal Power Station (ITPS), owned by Orissa Power Generation Corporation (OPGC), Govt. of Odisha. This work was initiated during 2018-19 and completed during the reporting year (2019-20).

WLF team completed topographical surveys; pumping tests on the source bore wells; and collected data for design of water supply schemes during 2018-19. A detailed report for each of the schemes was submitted to SACH, New Delhi by the end of March 2019.

During 2019-20, based on the feedback received on the draft reports, revisions were done. The designs were changed so as to use pre-cast cement slabs (or) plastic panels for over-head tanks, in order to reduce the over-all costs and time to complete the construction works.

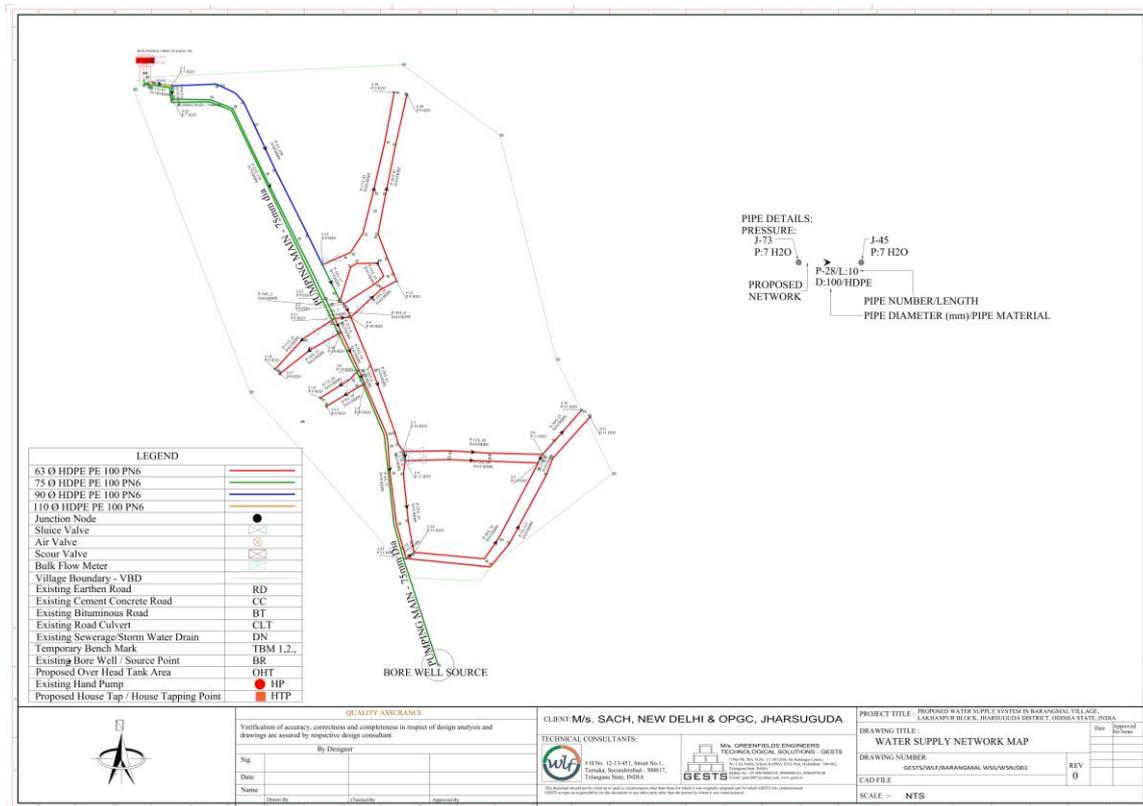


Fig.1: Design of water supply system

3.2. Promotion of Vegetable Cultivation in Trellis (*Pandals*)

Watershed Support services and Activities Network (WASSAN) received a grant from BfdW, Germany for implementation of water conservation, efficient use and ground water management activities during 2019-20. WLF has associated with WASSAN to study different types of *Pandal* cultivation models in Andhra Pradesh & Telangana states.

Yadadri Bhongiri District in Telangana state was selected as one of the study area where *pandal* cultivation under Mahatma Gandhi National Employment Guarantee Scheme (MGNREGS) is high in numbers. During Jan-Feb 2020, visits were made to 08 villages in 03 *mandals* (Fig.2). Structured data collection from 36 farmers using pre-defined formats was done. The study details are given in Table 2.

Table 2: Details of sample farmers in different villages

Sl.	Name of the villages	Mandal	No. of Farmers sanctioned	No. of farmers implemented	No. of sample farmers
1.	Motakondur	Motakondur	12	4	1
2.	Dharmaram	M.Turkapally	43	16	
3.	Gollaguda		15	5	
4.	Gopalapuram		27	5	
5.	M.Turkapally		21	7	3
6.	Mulkalapalli		16	10	4
7.	Nagipalle		25	1	
8.	Velpu palle		21	6	
9.	Chowdarpally	Bommalararam	13	4	

10.	Govind Thanda		8	4	
11.	Malyala		8	7	5
12.	Solipeta		35	11	8
13.	Thimmapuram		51	20	15
Total			295	100	36

WLF designed formats to collect the data from the *pandal* cultivating farmers. Farmers are doing cultivation each in half acre of land. The *pandals* constructed using stone pillars and few of the sample farmers used cement pillars. But some farmers having larger land-holding, extended the *pandals* to 2-5 acres with their own capital. These farmers have good access to the urban markets in Hyderabad.

Following are the major findings from the study:

1. *Pandal* cultivation is done by the farmers having water facility from bore wells. Generally, farmers having larger landholding are sparing part of their land for this practice.
2. Drip irrigation is used for *pandal* cultivation by the farmers. Due to clogging of drip laterals, farmers replaced the in-line drip with on-line emitters. The yield of most of the bore well is low. No water conservation practices are followed by the farmers.
3. Bitter guard, Ridge guard and Tomato varieties are cultivated in rotation of crops. In other words, at the end of tomato crop on the ground, the climber varieties are sown which last for 2-3 months. End of the crop on the trellis, again ground creeper varieties are sown. This is done to avoid excessive shade on the crops on the ground.
4. The total cost of the unit approx. Rs. 1,25,000 per 0.5 acre of land. Apart from subsidy provided by the Govt., farmers need to bear around 25% of the cost of pillars (approx. Rs. 20,000). This is a major discouragement for small farmers.
5. Use of stone pillars from far off quarries is escalating the transport cost of poles resulting in increase in the burden on the farmer.



Fig.2: Vegetable cultivation units in Bhongir dt.

The study will be extended to other States in India, in association with local NGOs, in coming months. A document on the diversity in the traditional *pandal* cultivation practice will be developed end of this study.

3.3. Energy interventions by WLF

Farmers use electricity panel boxes with agricultural bore wells for electricity supply and operation. Due to low quality; poor installation and poor maintenance, some of them are in dilapidated condition. Electricity shocks and accidents at pump-sets are very common, sometimes resulting in killing of farmers and their family members.

During 2018-19, Institute of Electrical and Electronics Engineers (IEEE), Hyderabad chapter designed a safe panel box that also facilitates energy efficiency. WLF collaborated with IEEE in field-testing of these panel boxes by installing them at six agricultural pump-sets in Gundala mandal, Bhongir district, Telangana. Each farmer was provided partial financial support of Rs.3,250 against the total unit cost of Rs. 6,250.

During current year, WLF further improved the safety panel boxes with timers. It is very easy to operate by the farmers. Based on the water availability in the well, farmer could set the pumping time. After completion of the set time, the pump-set automatically stops. Two such timer panel boxes were provided in Gundala Mandal, Yadadri Bhongiri District. Currently, all the safe panel boxes are working without any problem.

On 25 July 2019, WLF team visited to see the functioning of the electric safe panel boxes. The team interacted with the beneficiaries about changes in the situation before and after fixing of the panel boxes. Farmers expressed satisfaction with the new panel boxes and told that more farmers are interested to install in the surrounding villages.



Fig.3: Interaction with farmers and field observation of panel boxes

Following are the benefits of safe panel boxes observed from the field visit:

- No power fluctuations while running the motor
- Electric shocks got decreased and minimized
- Motor repairs reduced resulting in saving of repairs costs to farmers
- Burning of motor winding also got minimized

3.4. Trainings and meetings by WLF

During the year WLF organized two training programs as part of capacity building initiatives for the year 2019-20, whose details are given below in the Table 3:

Table 3: Details of training programs by WLF

Sl.	Title of the Training Course	Dates	Total Participants
1.	Training on Aquifer Recharge in Rural & Urban areas in Hyderabad, Telangana	16 Dec 2019	54 (Male 53, Female 1)
2.	Data Analysis, Visualization and Interpretation for NGO staff, in Bangalore, Karnataka	8-11 Jan 2020	12 (Male 09, Female 03)

3.4.1. Training on aquifer recharge

Ground water has been increasingly used for domestic, agricultural and industrial needs in India. Over recent decades, over-exploitation of ground water resulted in drying of bore well; low-yield from the wells and consequent economic losses. This training introduced various measures of rain water harvesting and aquifer recharge suitable for rural and urban areas in different kinds of locations, such as, agricultural lands; small independent houses; urban apartments; gated communities etc.

A total of 54 participants attended this training program from Andhra Pradesh, Telangana and West Bengal states. The event was organized at FTCCI (Surana auditorium), Red hills, Hyderabad. WLF provided training manual and a short film (in local Telugu language) on the aquifer recharge to all the participants.

Mr. Ramamohan, Executive Director, WLF conducted the training and Mr.Udayashankar, Chairperson, WLF shared his experience on aquifer recharge measures and their maintenance (Fig.4). Many of the participants expressed their interest to go back and implement the recharge works in their own lands / premises.

With encouraging response from farmers, WLF has planned to develop the short film in English as well as Kannada during the year 2020-21.



Fig. 4: Training on Aquifer Recharge in progress

3.4.2. Training on Data Analysis, Visualization and Interpretation

Data collection, analysis and interpretation is integral to their primary work of different NGOs and researchers. Often skills required to collect, record and analyze the data are lacking in them. Though NGOs implement their activities effectively, they fail to report the data collected effectively. Therefore, WLF planned this program to strengthen the capacities and skills of staff in NGOs and research students.

This four-day residential training program on 'Data analysis, Visualization & Interpretation' was organized at Karnataka Regional Organization for social Services (KROSS), Bengaluru, Karnataka. 12 participants were from different NGOs, Govt. departments, research agencies and academic institutions.

Mr. Ramamohan and Dr. Anke Shuermann facilitated the sessions and organized the event. Participants were given inputs on both qualitative and quantitative data analysis through various group activities; brain-storming sessions as well as hands-on sessions on R software (Fig.5). Simple statistical and data compilation techniques were introduced to the participants during the event. End of the event, participants felt that the inputs on data analysis using R and qualitative data handling were quite useful and made much easier for them to grasp the basics in the limited period of time.



Fig. 5: Training program in progress

3.5. Guidance on rainwater harvesting and recharge

WLF has been constantly and consistently striving to promote rain water harvesting and ground water recharge practices in both rural and urban areas for last few years. Bore well recharge method is an effective method for recharging large quantities of rain water into aquifers in a short span of time.

Based on the success of this method in different geological settings, many farmers in India (mainly from different parts of Telangana and Andhra Pradesh, but also many from other states in India) approached for guidance to replicate the technology in their own farm lands. Many households, gated communities and apartments requested technical advice from Mr. Ramamohan who is having long experience in rain water harvesting techniques.

Thus, WLF provided the advisory services and guidance to 85 such farmers during the year, without charging any cost to them. Further, two urban communities and 26 individual households & apartments, from Hyderabad and other cities in India, got advice from WLF on implementing rain water harvesting and recharge systems in their premises.

3.6. Publications and dissemination of knowledge by WLF

During the year 2019-20, following publications were made by WLF, which are based on the past experiences:

- Training manual developed on 'Aquifer Recharge in Rural and Urban areas'. It is a do-it-yourself practical guide for construction of aquifer recharge systems in different contexts, such as agricultural land, urban houses or in industrial premises
- A short-film was developed by WLF on borewell recharge structure construction and maintenance in agricultural lands. The film covers testing of bore well for recharge potential; construction methodology as well as maintenance of the structure. It is very useful for both rural and urban areas. The film is shared through the YouTube video link:
<https://youtu.be/Vp9D4UTMFPI>.
- An article detailing the borewell recharge and maintenance was published by Sakshi Telugu newspaper in its Agriculture page on 04 June 2019. Many farmers and urban residents came to know about WLF and rain water harvesting methods through this article.

3.7. Collaborations and other meetings

On behalf of WLF, Mr. Ramamohan participated in the following meetings during the year, explored possible collaborations and shared the development works carried out by WLF:

- Met Mr. Rafiq UI Islam, CSR Head, National Thermal Power Corporation (NTPC), Ramagundam, Telangana on 19th March 2020 to discuss possible collaborations with WLF
- WLF team met Joint Commissioner, Commissionerate of Rural Development (CRD), Telangana, to explore collaboration with MGNREGS in scaling-up of borewell recharge and roof water harvesting methods in Telangana state.
- WLF team met Mr. Satyanarayana, DDM, NABARD, Nalgonda to collaboration for the promotion of water conservation activities in Undivided Nalgonda District, Telangana.

4. Priorities for the year 2020-21

During 2019-20, WLF made efforts to not only carryout development activities in rural areas, but also initiated actions in urban water management. WLF started skill development courses and realized that there is immense need for upgrading the skills of NGO staff so as to improve their impacts on target communities. The year also saw initiating a pan-India study on the traditional methods of cultivation of vegetables in trellis (*pandals*).

During 2020-21, WLF would like to initiate new activities and expand the on-going activities in Andhra Pradesh and Telangana States. Further, WLF will also take the learnings from the study on *pandals* and pilot few units for the benefit of small and marginal farmers. The design of these units will be done using different construction materials (ex: PVC pipes, bamboo poles etc.) and different structural forms (ex: slanted pandals, discontinuous pandals etc.) WLF will add more staff and take steps

to build their capacities on growing requirement of technical services from WLF in the area of water management.

WLF will continue to pursue action studies and publications during the year from the experiences it gains from the grass-roots. A new study involving MERU rings for prevention of chemical scaling in pipes and drip systems will be started during 2020-21. Further, efforts will be made to relate with Government Departments and CSR agencies to leverage co-finance to the on-going activities and projects. This will help to magnify the scope and impacts during the coming years.

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