



Swajal

Sarnachar

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SWACHH BHARAT MISSION (GRAMIN)

स्वच्छ रहें स्वस्थ रहें,



National Sanitation Awareness Campaign (Glimses)



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Editorial

India In accordance with the spirit of 73rd amendment of the constitution to make effective, strong and strengthen of the decentralization of power and empowerment of the three-tier Panchyat Raj Institutions, Swajal Pariyojana endow water supply through community participation. The concept of Demand-Driven approach to select, plan, construct and manage the work of water supply scheme through involvement of community by adopting environmental improvement components like liquid waste management, environmental consciousness, women & backwards area development are subject of inclusion of a positive significant development of Swajal Samachar. This journal provides a forum for user to get familiarize/ participate on various levels of policy planning and arrangements under Drinking Water and Sanitation.

Uttarakhand is the state of hilly villages. Approximately 69.45 per cent of the total population is located in rural areas. Various Schemes have been started by the state government to provide the basic facilities to villagers. Till now 1297 Gram Panchayats have been saturated by 1394 drinking water supply schemes. Community participation is the basic theme of these schemes. Rural participation is being prioritized for the development of rural zones. The project, taking into consideration of sanitation & environmental cleanliness trained villagers to construct toilets and manage solid and liquid waste, consequently this made villagers aware about their health & hygiene benefits by adopting the ideal village policy and become determined to make their village Nirmal Gram.

We invite children, Students, teachers, Engineers, PRI Representative, voluntary organizations and the public to send their Suggestions, Articles and comments for the next issue of this magazine. So that the efforts of awakened citizens of the State are done towards ensuring the sustainability of their drinking water supply and Sanitation facilities system created by them in the state can be put forth.

With best wishes Happy New Year

From the Editor's Desk

13 Years of O&M-Improved Rural Water Supply System: Village Parwada

Abstract:

We are writing about the construction, operation and maintenance of water supply system in rural area with the participation of community with supervision & monitoring by Implementation agency and GoUK.

Concept:

It is common to refer to operation and maintenance of rural water supplies in single term, “O & M” however the operation refers to the direct access to the system by the users. Maintenance, on the other hand, is to do with the technical activities, planned or reactive, which are needed to keep the system working.



UWSSC meeting regarding O & M

Introduction:



Reservoir along with pump house

The Uttarakhand Rural water supply and Sanitation Project was the demand driven approach system from the community. Earlier the community was facing the huge scarcity of water. They collect & fetching the drinking water from far away. The biggest challenge is to bring about a change of mindset in which, payment of realistic tariff for a reliable service commitment to provide that service. In other words customer- becomes the norms.

Now all the households in the village have sanitary Latrines, Quality potable water, Compost, Garbage pit & Soak pit for Solid and Liquid Waste Management, decline in the rate of child mortality, water borne diseases like Jaundice, Cholera, Diarrhea, Malaria etc. good quality compost is prepared and village is open defecation free. In the year 2008-09 the village awarded Nirmal Gram Puraskar by Honorable President of India. The economic static of the community increased.



Background:

Most part of Kumaon lies in high terrain, some part however lies in *Tarai Region and Bhabar region areas*. Hilly areas of Uttarakhand have always scarified for drinking water. Considerable labour & time are spent each day by women folk in potable water from long distance for the family. The most of the villages are isolated. These lack of drinking water facilities, proper sanitation and drainage arrangement which cause environmental hazards. The household are too poor to pay realistic water charges, people who have benefited from an improved water supply often claim that it is one of the most important aspects of the infrastructure which they will enjoy. There is the complete lack of portable drinking water and sanitary latrines as the people uses open areas. The villagers are living in state of unhygienic and unsanitary conditions before the Swajal scheme commissioned in this particular village.

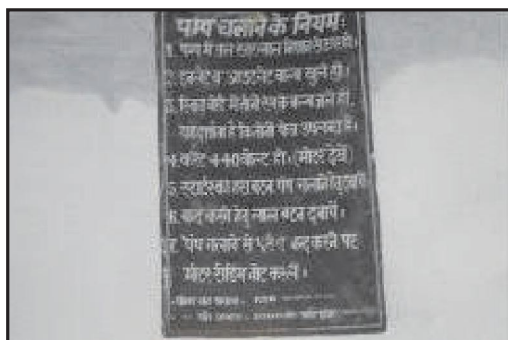


Water Filtration Unit

Description of Water Supply Scheme & Strategies adopted:

The Parwada village is a single village Grampanchayat. It has 206 households comprises 1440 population scattered in 08 habitation/ mazara situated 50 km away from district headquarter- Nainital.

Earlier there was no water supply scheme in the village, so that, no one of the villager are happily. The economical as well as the social status of the village was poor there were no scope of income generation program show the maximum house holds were poor.

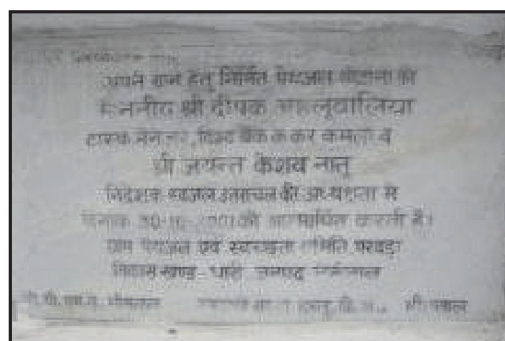


Signboard for Operating the Pump

The chronic shortage of water is a perpetual experience of the community of the villagers. The unsanitary conditions are restorable for the many water diseases gastroenteritis, diarrhea, typhoid, Jaundice etc, which is more pronounced during the summer month. To overcome this drawbacks & limitations of Government has despite adopted a new strategy where by the villager are to be involved

in construction and maintenance of the Scheme. To generate a sense of belonging in the villager, it was envisaged to give 1% cash contribution & 9% labour contribution aggregate 10% of the cost of Scheme. In 1998 the world vision India (as NGO) is been selected as a support organization, the calls for involvement of the community for which the mobilization is being carried out through the NGO. The District Project Management Unit-Bhimtal Swajal played a role of implementing agency for responsibility of planning, Implementation and subsequent maintenance of various component of the project. The VWSC (Village water and Sanitation Committee) formed under guidance of DPMU-Bhimtal (Swajal) to carry out the various activities.

At that time to meet out the desired demand of water, 03 water supply scheme of different available technological option constructed, one is surface water pumping, other one is Gravity and one is of RWHT (Rain Water Harvesting Tank) constructed. For better implementation of scheme the Engineers and Specialist of DPMU regularly watched and monitored the scheme. Today after 13 years all schemes are feeding the population at their desired water demand.



Inauguration Board of Scheme

Presently each house hold contributing R. 125/- per month for O&M and meet out the electricity charges and other repairing works from their funds. O&M details of scheme since last 5 years for Parwada surface water pumping scheme.

Year	Income from tariff (₹)	Expenditure (in ₹)				
		Electricity Charges	Salary (SMW)	Chlorination	Repairing Works	Other Maintenance Expenditure
2008-09	98040	52000	19500	500	1700	6800
2009-10	46050	35000	7200	500	1500	5500
2010-11	77890	34900	5700	400	1500	4500
2011-12	44500	31550	10000	500	1000	4400
2012-13	56800	32500	8400	600	2000	4000
Total	323280	185950	50800	2500	7700	25200

Balance amount in O&M account of VWSC: - ₹50845/- (₹33845 as per Bank account and ₹17000/- cash in hand).
Bank Account Number - 10340100001175-Uttarakhand Gramin Bank Bhateliya, Nainital)

Source: - VWSC Parwada



Factor of Success: four crucial factors seen for their success regarding O & M of Scheme:

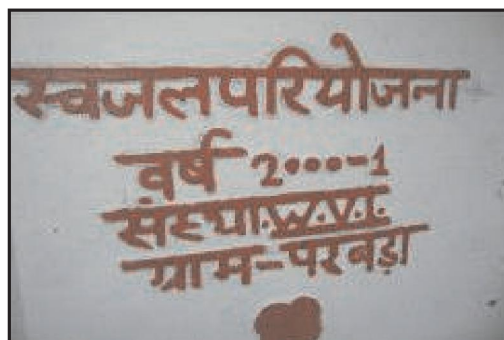
1. Strong User perception of need & consequent high motivation to maintain an improved water supply.
2. Strong community level institution in which those with the greatest interest in maintaining supply have a powerful voice.
3. A proactive implementing agency which can provide both technical and software and as necessary resource which are genuinely beyond the capacity of users.
4. A proactive and responsive support organization which can provide software support for building the capacity of user.

Sustainability of Project:

Nearly 13 years they have been in operation and maintenance. The strong need, highly motivational toward to maintain the improved water supply scheme and proactive implementing agency and support organization make this project sustainable.

Lesson Learned:

- The villagers can do and successfully participate in construction and maintenance of rural water supply system if they have actually needed the portable drinking water and can live in safe and hygienic living condition.
- Great interest to maintain the scheme itself.
- Implementing agency and support organization will have to play a proactive role to sustain this project taking villagers and community in confidence.
- Women Involvement is necessary



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District Project Management Unit,
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Training on Water Quality Monitoring & Surveillance (WQM&S)

Blocks: Dunda, Chinyalisaur, Bhatwari, Naugaon, Purola, Mori

Conducted By: Himalayan Educational and Resource Development Society (HERDS)

1.5 billion Population of world have limited or no access to improved water sources. They are bound to consume water of unsafe nature with limited means causing large number of deaths & severe water borne diseases. Acknowledging the priority of safe water access to large population base, United Nation has included this as one of the millennium development goals to be achieved by 2015.

Himalayan Educational and Resource Development Society (HERDS) with technical & financial assistance of DPMU SWAJAL Uttarkashi organized one day workshop each at different blocks of Uttarkashi (Dunda, Chinyalisaur, Bhatwari, Naugaon, Purola & Mori) on topic of Water Quality Monitoring & Surveillance (WQM&S). The program achieved desired success with participation of around more than 450 Asha Workers & Village Pradhans from 454 villages of Uttarkashi District. Number of issues ranging from practical trainings on water quality to relevance of safe water consumption for villagers had been discussed in detail.



Demonstration of used Field Test Kit (FTK)

Environmental Specialist from DPMU SWAJAL Uttarkashi Dr. L.S. Chauhan & Mr. Debesh Kothari Secretary, HERDS initiated the workshops discussing the operations of SWAJAL project in Uttarkashi district and main inputs of Water Quality Testing conducted in the first phase of project. Relevance of water quality testing at village level and frequency of such training during a year was communicated to participants. Discussing the inter connection of water and sanitation, issues related to open defecation in India and in rural areas to be more than 60% it was communicated that the fecal parts once reach the water source makes water contaminated and carry E-Coli bacteria which causes diarrhea which may claim life of a child in most of the cases. Around 3 lakhs 50 thousand kids of less than 5 years of age lost their life in 2004 due to diarrhea only.



A practical training by the key trainer on 10 parameters i.e. pH, total hardness, iron, chlorine, residual chlorine, nitrate, turbidity, alkalinity, fluoride and bacteriological testing through field testing kit was. How the community needs to be involved in training exercise and the role of WASH committee for water quality testing and monitoring the results thereafter was shared with participants. Training regarding water sample collection for institutional and water testing through field testing kit and decoding the water testing results at community level was provided to participants by training facilitator. A practical training was also done where all the participants did the practical testing through kit in different groups and was an enjoyable experience. After the training exercise a refill kit was being provided to every Asha participant representing Gram Panchayats of Dunda block so that they may conduct the water quality test at regular interval and update the village record on all the testing parameters. The household level treatment techniques of water was also being discussed with participants by expert from SWAJAL with some guidelines over the basic symptoms of pure drinking water as tasteless, colorless and odorless. Mr. Udit Singh from IIM Calcutta discussed how we can save our financial resources by saving our expenditures over diseases and can utilize it productively. The workshop deliverables was as per objective and was being appreciated by all the participants including ASHA Workers, Gram Pradhans & facilitators.

Methodology:

Training on Water Quality Surveillance and Monitoring workshop was held with an objective to make village representatives familiar from water quality testing on 10 important parameters. Knowing the relevance of consuming safe water drinking was as necessary as knowing how to conduct water quality testing? Identifying this need, the session was introduced with a presentation structured by HERDS showing how the water sources are getting contaminated by wrong practices of human beings. During the presentation, it was reiterated that every household should have their toilets and should abandon the practice of open defecation. Giving example of why India scores number one in open defecation, it was communicated to Asha members of villages that it's the prime duty of Asha members to educate villagers in this regard. Since 40% of diseases are water borne, controlling consumption of unclean water can save a lot of money of poor people from being wasted on treatment of diseases.

Communicating the message on hygiene in an interesting way, a lot of videos involving school children as well as how we can treat water at household level was also communicated to participants through videos which were enjoyed a lot by participants.

After talking on relevance on safe water consumption, it was the turn of practical water quality testing, which we encouraged in every workshop to be done by the participants only under the supervision of subject matter experts from HERDS and SWAJAL. Once conducted by themselves, Asha members felt confident that they will be easily doing all these tests at household level. Once the training on water quality testing procedure was complete, all the village representatives were distributed refill kits ensuring that they will conduct the water quality test at village level at regular interval and update the results with village water and sanitation committee.



Analysis of finding & results

WATSAN Situation:

India's huge and growing population is putting a severe strain on all of the country's natural resources. Most water sources are contaminated by sewage and agricultural runoff. India has made progress in the supply of safe water to its people, but gross disparity in coverage exists across the country. Although access to drinking water has improved, the World Bank estimates that 21% of communicable diseases in India are related to unsafe water. In India, diarrhea alone causes more than 1,600 deaths daily—the same as if eight 200-person jumbo-jets crashed to the ground each day. Hygiene practices also continue to be a problem in India. Latrine usage is extremely poor in rural areas of the country; only 14% of the rural population has access to a latrine. Hand washing is also very low, increasing the spread of disease. In order to decrease the amount of disease spread through drinking-water, latrine usage and hygiene must be improved simultaneously.



Participation of Trainees in Training program

The Millennium Development Goals call for a reduction of child mortality by two thirds between 1990 and 2015. As the deadline approaches, the reality is that although progress is being made, much more remains to be done. Nearly nine million children under five years of age die each year. Diarrhoea is second only to



pneumonia as the cause of these deaths. Why is diarrhoea, an easily preventable and treatable disease, one that in the developed world is considered little more than an inconvenience, causing an estimated 1.5 million deaths every year of children less than 5 years in age?

Improvements in access to safe water and adequate sanitation, along with the promotion of good hygiene practices (particularly hand washing with soap), can help prevent childhood diarrhoea. In fact, an estimated 88 per cent of diarrhoeal deaths worldwide are attributable to unsafe water, inadequate sanitation and poor hygiene. Water, sanitation and hygiene programmes typically include a number of interventions that work to reduce the number of diarrhoea cases. These include: disposing of human excreta in a sanitary manner, washing hands with soap, increasing access to safe water, improving water quality at the source, and treating household water and storing it safely. Improvements in sanitation reduce the transmission of pathogens that cause diarrhoea by preventing human faecal matter from contaminating environments. Improving sanitation facilities has been associated with an estimated median reduction in diarrhea incidence of 36 per cent across reviewed studies.

Health Economics:

The rural population of India comprises more than 700 million people residing in about 1.42 million habitations spread over 15 diverse ecological regions. It is true that providing drinking water to such a large population is an enormous challenge. Our country is also characterized by non-uniformity in level of awareness, socio-economic development, education, poverty, practices and rituals which add to the complexity of providing water.

The health burden of poor water quality is enormous. It is estimated that around 37.7 million Indians are affected by waterborne diseases annually (viral hepatitis, cholera, jaundice, typhoid are examples), 1.5 million children are estimated to die of diarrhoea alone and 73 million working days are lost due to waterborne disease each year. The resulting economic burden is estimated at \$600 million a year. Ten million people are vulnerable to cancers from excessive arsenic and another 66 million are facing risk of



Presentation by participant



fluorosis, now endemic in 17 States. Fluorosis is affecting future generations too through pregnant mothers whose anaemia is caused by fluorosis. Anaemia produces low birth-weight babies who in turn manifest their mothers' nutritional deficiencies through physical and mental deformities. Besides, there prevail health impacts of drinking-water with other environmental pollutants such as industrial wastes.

According to Down to Earth, rural people in India spend at least R.100 each year for the treatment of water/sanitation-related diseases. According to the Government of India, this adds up to R.6,700 crores annually, which is just R.52 crores less than the annual budget of the Union Health Ministry and more than the allocation for education. However supplying clean water alone would not solve health related problems. Only an integrated approach of water quality improvement with improvement in water availability combined with sanitation and hygiene education will help address this issue.

Household Treatment:

Once contamination is detected in a water source, there is need for treatment. In case of rural areas, modern water purification technologies might not be viable. In villages, it is important that simple technologies that are easy to use and can be operated without much technical know-how be promoted. The price factor is also important as technologies with high operational and recurring costs might not be useful. In India, one cannot neglect the use of traditional methods of water purification.

When it comes to dealing with maintaining water quality, the users and in large the communities have to

Washing one's hands with soap can reduce rates of diarrhoeal disease when carried out at critical moments: after using the toilet, after cleaning a child's bottom and before handling food. Research suggests that hand washing with soap is effective even in overcrowded and highly contaminated slums in the developing world.

Studies have also pointed out that washing hands with water alone is much less effective in preventing disease than using soap. Soap breaks down grease and dirt that carry germs and disease-causing pathogens. Using soap also increases the amount of time spent washing hands, compared to water alone. Yet lack of soap does not seem to be a major barrier to hand washing:

It has been found that 95 per cent of mothers in developing countries have some sort of soap product at home. To better understand ways to promote hygienic behavior, research has been carried out regarding consumers' hand washing habits and factors that motivate change. This research shows that key triggers for hand washing are feelings of disgust, nurture, comfort and desire to conform, rather than health concerns alone. These findings are being used to create more effective hygiene programmes.

Source-UNICEF



play a key role in maintaining hygiene near water sources. One has to improve the ways in which we collect and store water so as to avoid contamination while collection, storage and use. With the decentralization of programmes for water supply it is essential that communities and institutions like Panchayats are actively involved in the planning, implementation and execution of programmes for water supply. These institutions will also have to undertake the monitoring of water sources and be made aware so simple remedial measures. It is true that this will require training and capacity building at a large scale.

Audio-Video(IEC Campaign):

Audience have been shown a video describing hygienic practices of safe water drinking and sanitation which played a vital role in knowing exactly, how they can be caught in trap of diseases. Video developed by Plan International & WASH Institute jointly shows students from a particular village suffering water borne diseases and ask for help from some heaven power. Suddenly a character Mr. WASH comes down from somewhere and directs them what care they need to take while using water from open source in a village. It was shown too how open defecation can lead to injuries as well as diseases like diarrhoea since the flies can become a carrier in spreading the fecal to sources of food which are open as well as water sources. How we should treat an infant suffering from diarrhoea was also shown properly.

Along with water quality testing, it was equally important to make the village representatives aware about household treatment of water to avoid bacteriological contamination and make it potable. The sound practices of consuming potable water and avoiding open defecation can lead to a happier and more productive life was well appreciated by participants. On a large scale, it was felt that if we take some care, we can ignore casualties occurring out of diseases due to consumption of unsafe drinking water and also felt that prevention is better than cure in most of the cases. As majority of participants were ASHA workers, they easily correlated the health benefits of hygienic practices adopted by villagers and how they can play a vital role in communicating this message to large section of society.

Doctors Suggestion- Dr Subodh Kumar Joshi, the medical in charge of Mori General Hospital conducted a session with the target audience of water quality surveillance and monitoring workshop communicating how the disease of Polio is also caused with virus originated through unhygienic practices of human beings. He specially suggested all the Asha workers of Mori block to campaign in full swing spreading consumption of clean drinking water and healthy hygienic practices among the villagers of this tough terrain

geography of Uttarkashi. Dr Joshi also conveyed how such diseases can be stopped at the household's level, if we clean our sources of food as well as fluid consumption.

As per Dr. L.S. Chauhan from SWAJAL in many rural areas, people are not aware of the quality aspects of the water they use for drinking and other purposes. In many instances, the quality assessment of water is based on perceptions about color, odor and taste. Groundwater which may appear safe by physical perception may in fact be contaminated with highly toxic ions of heavy metals and other organic compounds. In other instances, badly looking water from a good source may require only a simple treatment to make it potable. Such gross mistakes regarding the quality of water are committed in many rural areas because of lack of awareness, and non-accessibility to analytical facilities.



Practical of FTK by participants

Water Quality Testing:

There is a need for making people in rural areas aware about the water quality issues, and provides them with economical and easy to use test kits for analyzing basic water quality parameters, like bacteriological quality, alkalinity/ acidity, hardness, fluoride, iron, nitrate/ nitrite, sulphate, residual chlorine and pH. It was clearly communicated that objective of this project was to make the participants familiar regarding the usage of water quality testing kit training the trainers to create awareness about these kits and water quality issues. During all the workshops, practical training on different parameters has been provided to all the participants with more emphasis on training done by the participants in small batches. For every testing during the workshop, we invited a batch of 3 to conduct these tests to make the participants familiar from test. Even if the availability of water quality testing kit is with majority of gram Panchayats, at majority of these places these kits are not utilized in the lack of technical knowhow. With this workshop we made sure that Asha workers at village level have confidence to conduct these tests. For proper monitoring of water quality test results, it was advised the participants to document the results of water quality testing in the register with the frequency of such tests. Also, it was suggested to conduct these tests at least twice during a year viz. during summers and rainy season.



Sanitation Ambassador- Dr. L.S. Chauhan from SWAJAL also communicated that how the Asha workers can play a role of Sanitation ambassador at village level motivating villagers to construct toilets at household level and use it frequently.

It was shared with the workshop participants that though groundwater is less susceptible to pollution than surface water; the quality problem in groundwater arises because of:

- (i) Contamination caused by the very nature of geological formation, (e.g. excess fluoride, arsenic, brackishness, iron, etc.)
- (ii) Contamination from domestic, agricultural and industrial sources (e.g. Nitrate, heavy metals, organic pollutants etc.)

About 15 percent of the rural water supply comes from surface water sources. The major quality problem for surface water is seasonal turbidity. Surface water also suffers from microbial contamination, which is mainly anthropogenic in origin. There is also evidence of an increase⁶ in waterborne diseases in India over the last decade, specifically acute diarrhoeal cases. It will be fair to deduce that the health benefits-in terms of reduction in waterborne diseases-have not been commensurate with the investments made in rural water supply. In addition, these diseases result in loss of work days, estimated at 180 million person days annually. According to various estimates, this expenditure on health adds up to R.6, 700 crores annually (approximately R.60 per person per year). A more recent study by the Water and Sanitation Programme (WSP) of the World Bank calculates R.2.4 trillion (approximately R.2150 per person per year) as total economic impacts of inadequate sanitation in India.

A very innovative technique of conducting workshop was organized by making it audio video based where on projectors it was being shown to participants about water pollution, their ill effects and how we can treat water at household level. With the help of rhyme, it was propagated how a simple practice of hand washing before and after some specified activities can keep the diseases away from people. In the household, we should keep the drinking pots at some height to avoid water contamination.

Water Quality Monitoring- (WQM):

Despite substantial investments in rural water supply and increased focus on community based approaches, the ground situation has not improved significantly. WQ remains a key concern till today. About 1.2 lakhs habitations are affected by chemical contamination and



approximately 1 out of a 100 people are affected by acute diarrhoeal diseases.

In addition, the recent Parliamentary Standing Committee¹¹ on rural development noted a “near absence of community participation in all stages (of rural water supply) from planning to implementation”. Devolution of functions to the PRIs, in keeping with the spirit of the 73rd Constitutional Amendment, has also not been satisfactory. At present, some states have transferred the full range of functions to GPs; others have transferred only a few functions. Only 44,000 (about 8% of 5.96 lakhs villages in India) VWSCs, which were meant to be in charge of village water and sanitation as a standing committee of the GP, had been formed till 31st March, 2011.

At the same time, village institutions with limited technical capabilities have also found it hard to deal with an expanding range of water quality problems. Many of the GPs and VWSCs, which have had facilities handed over to them, lack the technical skills to independently manage and operate new sources and systems. Lack of understanding of WQ issues at the community level has also added to the problem. To solve such issues Government of India conducted such kind of refresher training covering each gram panchayat representatives so that each of such GPs become self sufficient for water quality management at village level.

Location:

A total of 9 workshops were organized across 6 development blocks of Uttarkashi covering a total of representatives from 454 Gram Panchayats.

It was a pleasant experience to cover 100% participation from all 454 Gram Panchayats from 6 development blocks of Uttarkashi. HERDS ensured that refill kit of Water Quality Testing Kit reaches each and every village with technical knowhow to conduct such test. Some of the difficult terrains were people drink water from unprotected source, this water quality testing will make them aware about drinking water quality and take preventive measures from disease outspread.

Dr. L.S. Chauhan

Environment Specialist, DPMU-Uttarkashi



Catchment Area Conservation and Management Programme (CACMP)

A Real Need for Long Term Sustainability of Water supply Sources

Introduction:

In Uttarakhand, Water crisis is viewed as a Joint effect of various factors causing environmental degradation. Regular reduction of vegetation cover, free grazing/overgrazing and, erosion of top soil have resulted into gradual reduction of recharging capacity of the water supply sources in the hills. On other hand large-scale deforestation, forest fires, intensive grazing pressure, fuel wood pressure on catchments and fragmented land holdings are the main causes of depleting water sources. These all factors are severely affected the catchments, which are directly or indirectly affected to sustainability of water sources for drinking water supply. Therefore, treatment of the catchments area carries the potential of reversing the decline in water resources to resolve the uncertainties associated with the water supply schemes. It can help meeting the household water needs of the people and may also get their participation in implementing the catchments area treatment works. Uttarakhand Rural Water Supply and Sanitation Program, Sector Programs is an innovative community based water supply & Sanitation Program, including source management & Protection for long-term sustainability.



**Measures for ground Water Recharge at
Chimarkh Kachiyola**

Objectives – Catchment Area Protection work:

- To maintain regular discharge of Water flow in the water supply source.
- To protect Sources from entry of domestic & wild animals.
- To improve Water quality through regular source testing by field test kit & H₂S Vial.
- To regularize sanitary survey in each stage of water supply Schemes by community.
- To promote long-term sustainability of drinking water supply sources and systems including provision of Roof Top Rain Water Harvesting,

- To promote renovation of traditional water sources situated nearby GP/Village.
- To promote biological & engineering measures to protect & improve ground water recharge of drinking water supply sources and systems.
- To generate community awareness for regular monitoring of their water supply sources as well as water supply structures.
- Promote to incorporate traditional ways of source protection & ground water recharge by using local experiences.
- Improve sanitation status nearby drinking water sources.
- At least one third discharge is left to maintain the ecological balance of the catchment area.

Criteria to select water supply schemes for Catchment area treatment:

Water supply schemes are selected for Catchment area treatment work on the basis of following norms-

- Villages in which the selected source have shown depletion in yield by more than 50%
- The water supply structures are under threat due to soil erosion
- Vegetation, Erosion and Water Quality Assessments
- Willingness of GP/ Villagers to participate and Technical feasibility.

Measures to be adopted - Source Centered Catchment Area Protection:

The Engineering and Bio-Engineering Catchment Area Treatment works to taken up as a part of activities for improvement of catchment area. Measures are to be taken to reduce the decline of source centered Catchment area & improve vegetation cover. Some Suggestive measures can be taken by the community.



Coolie Walling at Bunga (Tharali)



Contour Trench at Bunga (Tharali)



- **Biological measures**

- (i) Plantation in Catchment area
- (ii) Develop Meadow & grass patches.
- (iii) Terrace farming
- (iv) Nursery development
- (v) Fodder management

- **Soil & Water Conservation:**

- (i) Check dam
- (ii) Gully plug
- (iii) Percolation pond
- (iv) Renovation of chal-khal
- (v) Rainwater harvesting Tank

- **Social Measures:**

- (i) Capacity building and awareness camp
- (ii) Social bi-laws to reduce human interference & fuel wood pressure.
- (iii) Field visits
- (iv) LPG campaign



**Chal- Khal at Lathi WS Scheme,
District Bageshwar**

All above measures can be selected on the basis of Vegetation analysis, soil erosion analysis & water source sanitary survey with the support of villagers/ users groups as per site requirement.

Methodology of CACMP Planning and Implementation:

As per Uttarakhand Rural Water Supply and Sanitation Program (Sector program) Guidelines, the CACMP, implemented by adopting different steps in planning, implementation as well as Operation & Maintenance phase.

1. Planning:

1.1 Generation of Baseline Data:

Baseline data generated through extensive fieldwork and use of Participatory Rural Appraisal including, source measurement, land use pattern, source location, village

resource map & Treatment map to be generated and preliminary mapping of Catchment Area should be done. All data should be collected with the support of Gram Panchayat as well as User water sanitation Sub committee (UWSSC).

1.2 Preliminary Survey for Selection of CACMP works:

A Preliminary survey should be done for selection of water supply schemes for CACMP works along with water supply scheme survey. After survey, those schemes can be selected for CACMP activities where less vegetation cover, regular source discharge decrease symptoms, soil erosion and any pollution found nearby the source.

All Preliminary survey should be done with GP/UWSSC/Beneficiary groups/ Community members and different tools can be applied for the survey. Some tools are suggested as below:-



Bucket Type and V-Notch method of Source Measurement

- **Source Discharge Measurement:** source discharge history can be discussed with older members from community / beneficiary group to analyze decreasing source discharge pattern in previous years, while present source discharges can be measured at the time of survey.
- **Vegetation Cover Analysis:** Vegetation cover analysis should be done to analyze vegetation cover, causes of less vegetation cover, natural growing species and any other causing factors by using different survey methods and all required information's should be collected in vegetation analysis format.



Vegetation Assessment (Table-1)

GP: Village:
 Date: Site:
 Name of Water supply Schemes:

S.No.	Assessment question	Yes	No
1	Is the area fenced to control stock access and livestock kept out?		
2	If trees are present, is there an under storey?		
3	In areas where trees are not (naturally) present, there a variety of grasses, shrubs and broad leaf herbs present?		
4	Is the under storey mostly comprised of desirable shrubs and/or grasses?		
5	Is there a diverse range of trees and shrub species present (>10)?		
6	In untried areas, is there a diverse range of grasses and herbs (>10)?		
7	Are there predominantly native plants species present?		
8	Is there a mix of trees ages, from saplings to old growth (>50 years old)?		
9	Are the trees mainly healthy, with little or no disease and insect attack?		
10	Are there less than 20% of trees affected by parasitic plants?		
11	Is there regeneration of variety of native trees and shrubs?		
12	In non-forested areas, is there regular germination of native herbs and grasses?		
13	Is the ground covered with leaves, bark and twigs or other vegetative litter (dead grasses etc?)		
14	Are the logs and fallen timber on the ground?		
15	Are there mosses or lichens on rocks, fallen branches, and ground surface?		
16	Are weeds uncommon, sparsely scattered, absent or mainly around the edges of the area?		
17	Is the patch of vegetation a block rather than a strip?		
18	Is the vegetative area linked to other patches of vegetation by scattered trees no more than 50m apart?		
19	Is the area free from the threat salinity and/or high water tables in the next ten years?		
20	Is the area excluded from the fodder and fuel wood collection?		
	TOTAL SCORE OF YES ANSWERS		



Vegetation Assessment Rating

Yes Scores	Vegetation Assessment Rating
16+	Excellent-Healthy
10-15	Slightly degraded
5-9	Moderately degraded
0-4	Severely degraded

- **Soil Erosion Analysis:** Analysis should be done to analyze soil type, erosion type; causes of soil erosion etc. and all required information should be collected in soil erosion analysis format.

Erosion Assessment (Table- 2)

GP: Village: Date:			
Site: Name of Water supply Schemes:			
S.No.	Assessment question	Yes	No
1	Does the area have more than 30% bare ground exposed?		
2	Are there existing well worn tracks through the area?		
3	Is the predominant vegetation in the area, shallow rooted?		
4	Are there signs of gully erosion?		
5	Are some of these seams over 1m wide or deep in parts?		
6	Is the area subject to the flooding or runoffs from rain storms?		
7	Is the slope in the area steep or very steep?		
8	Are there sedimentation buildups from previous heavy rains or floods?		
9	Is the area used extensively by hooved animals or humans?		
10	Are the roots of trees and shrubs in the area exposed?		
11	Is there evidence of slumping?		
12	Has the area had a history of any landslides?		
13	Are there cracks in the grounds deeper than the width of your hand?		
14	Has the area been deforested in the last 20 years?		
15	Area there any waterways or channels (Flowing or dried up) through the area?		
16	Are the banks of these channels cleared of most vegetation?		
17	Is the area open to grazing year round?		
18	Does the top soil sit on bedrock, being susceptible to slipping?		
19	Does the topsoil sit on the bedrock, being susceptible to slipping?		
20	Are there underground springs or shallow ground water in the area?		
	TOTAL SCORE OF YES ANSWERS		



Erosion Assessment Rating

Yes Scores	Erosion Assessment Rating
0-4	Healthy
4-8	Moderate (some erosion evident)
9-12	Degraded (localized erosion)
12+	Severely degraded (extensive erosion)

- **Sanitary survey near by source:** Sanitary survey should be done, to analyze the pollution status, type of pollution, effect of pollution in water supply source etc. and necessary information collected through sanitary survey format.

Sanitary Survey Format

GP: Village:			
Date of Visit: Name of Source :			
Name of Water supply Schemes:			
S.No.	Specific Diagnostic Information for Assessment Risk	Yes	No
1	Is the spring unprotected?		
2	Is the masonry protecting the spring faulty?		
3	Is the backfill area behind the retaining wall eroded?		
4	Does spilt water flood the collection area?		
5	Is the fence absent or faulty?		
6	Can animals have access within 10m of the spring?		
7	Is there a latrine uphill and/or within 30m of the spring?		
8	Does surface water collect uphill of the spring?		
9	Is the diversion ditch above the spring absent or non-functional?		
10	Are there any other sources of pollution uphill of the spring? (e.g. solid waste)		
Total Score of Risks...../10			
Risk score: 9-10 = Very high; 6-8 = High; 3-5 = Medium; 0-3 = Low			
Results and Recommendations: The following important points of risk were noted:(list nos. 1-10) Comments: Signature of Surveyor:			



- **Water Testing-** water sample testing is a necessary process of source selection for any new water supply schemes, preliminary chemical and bacteriological testing can be done through Field Test Kit. Laboratory test of the water sample should be done from any recognize water testing lab.

Water sample Testing Report (Through FTK)

Sample No. Date: Name of Source:.....		
Name of Water supply Scheme:		
S.No.		Description
1	Name & Location of Source	
2	Name of District	
3	Name of Block	
4	Name of GP	
5	Name of Village & Habitation	
6	Type of Source	Hand Pump/Spring/Naula /Gadhera /other (Pl. Specify)
7	Sample Collection Place	
8	Type of Scheme	Gravity/Direct from Source/Pumping/Tube well/other (Pl. Specify)
9	Name of Water Sample collector	

Testing Result

Components	Limit as per ISO	Result
pH	6.5 to 8.5	
Turbidity	10 NTU	
Chloride	1000 Mg/Lit.	
Total Hardness	600 Mg/Lit.	
Total Alkalinity]	600 Mg/Lit.	
Fluoride	1.5 Mg/Lit.	
Nitrate	45 Mg/Lit.	
Iron	1.0 Mg/Lit.	
Residual chlorine	1.0 Mg/Lit.	
Smell	Nil	
Colour	Colour less	
Bacterial (by H2S Bottle)	Absent/Present	
Report- Water Sample is found OK / Polluted	Name & Signature of sample Tester	
Note: Water Sample testing is necessary from recognized laboratory & laboratory Test Report should be attached with DPR		



All above said surveys should be done for every new water supply Schemes as per provision in EMF (All formats with complete information along with all necessary signatures should be attached with each water supply DPR).

- Contour/ Community Mapping: As per above said survey/ study/ parameters, if treatment is required to protect source under CACMP works, Scheme/ site/ source can be selected for CACMP activities and contour/ Community mapping should be prepared of the selected site and attached with water supply Schemes with CACMP DPRs.

1.3 *Development of CACMP:*

After all these phases, actual CACMP development plan was chalked out and attached in the DPR. The plan included technical interventions to be done, drawing & estimates, implementation schedules, maintenance plan and assessment plan. The engineering and bio-engineering Catchment Area Treatment works as well as social works to be done have been taken up as part of activities for improvement of catchment area. Measures are to be taken to reduce the decline of source centered Catchment Area & improve vegetation cover.



SCHEME CYCLE FOR CATCHMENT AREA CONSERVATION & MANAGEMENT PROGRAM (CACMP) AS PER 9 MONTH PRE PLANNING & PLANNING PHASE										
MILE STONE EVENT	DETAILS OF ACTIVITIES	SUGGESTIVE MONTHWISE SCHEDULE OF ACTIVITIES								
		1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th
PRE PLANNING THROUGH PFR	IDENTIFICATION OF VILLAGES									
	PRE-FEASIBILITY SURVEY IN IDENTIFIED VILLAGES									
AGREEMENT WITH SUPPORT ORGANIZATION	PLANNING PHASE (PP) AGREEMENT FINAL IZATION & SIGNING									
ENVIRONMENTAL SURVEY	PLANNING PHASE SUPPORT ORGANISATION STAFF ToT ON CACMP									
	SOURCE CENTERED CATCHMENT AREA CONSERVATION MANAGEMENT & WATER QUALITY TRAINING TO UWSSC MEMBERS									
	EROSION ASSESSMENT & VEGETATION ASSESSMENT									
	WATER AVAILABILITY/SOURCE DISCHARGE ASSESSMENT									
	WATER QUALITY ASSESSMENT THROUGH FTK & RECOGNIZE LABORATORY									
	SANITARY SURVEY OF THE SITE/NEAR BY ALL SOURCE AVAILABLE IN THE SITE									
	MEETING WITH COMMUNITY/UWSSC/GP									
	ANALYZE DATA AND IDENTIFICATION OF NEED/REQUIREMENT FOR CACMP WORKS									
ALL ABOVE FULFILLED FORMATS WITH AUTHORITIES SIGNATURE SHOULD BE ATTACHED IN ALL NEW WATER SUPPLY SCHEMES DPR										
FINANLIZATION OF CACMP WORKS	IF SOME TREATMENTS WORKS REQUIRED, THEN FINALISATION THE SCHEME FOR CACMP WORKS AND ACTIVITIES FOR CACMP									
	PREPARE CONTOUR/ COMMUNITY MAP OF THE SITE									
	PREPARE TREATMENT MAP WITH SHOWING CORRECTIVE MEASURES/PROPOSED STRUCTURE									
	DRAWING & ESTIMATE PREPRATION OF THE PROPOSED WORKS									
	DISCUSS ALL WORKS WITH THEIR ESTIMATED COST,COMMUNITY CONTRIBUTION AS WELL AS OPERTAION & MAINTAINANCE REQUIREMENT WITH COMMUNITY/UWSSC/GP MEETING									
	NURSERY SURVEY/ NURSERY RAISING									
	FINALIZE THE CACMP WORKS AND ALL RELATED DATA/FORMATS SHOULD BE ATTACHED WITH DPRS									
A.T.D.	ORGANIZE AGREE TO DO MEETING FOR CACMP WORKS WITH THEIR ROLES & RESPONSIBILITY (COPY OF MEETING PROCEEDING ALSO ATTACHED WITH DPRs) DPR SEND TO DIA FOR APPROVAL									
COMMUNITY CONTRIBUTION	UPFRONT CONTRIBUTION FOR CACMP (AS PER DICIDED IN ATD/DPR)									

2. Implementation:

In this Phase all Proposed Activities in DPRs under CACMP works should be implemented by Gram Panchayat/ UWSSC in the technical guidance of engineers and environment specialist from DIA/ SO, within scheduled time.



SCHEME CYCLE FOR CATCHMENT AREA CONSERVATION & MANAGEMENT PROGRAM (CACMP) MONTH WISE ACTIVITY IN IMPLEMENTATION PHASE													
S. NO.	DESCRIPTION OF WORKS	SUGGESTIVE MONTHWISE SCHEDULE OF ACTIVITIES											
		1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th	10 th	11 th	12 th
1	IMPLEMENTATION PHASE AGREEMENT SIGN WITH GP,UWSSC,SO & DIA												
2	TRAINING OF UWSSC ON CACMP IMPLEMENTATION												
3	MARKET SURVEY, IMPLEMENTATION STRETEGY SUBMIT TO DIA												
4	RECEIVED 1ST PAYMENT BY UWSSC												
5	DEMAERCATION OF THE AREA , PLACEMENT OF SIGN BOARD												
6	COOLIE WALLING , CHECK DAM AND OTHER ENGINEERING MEASURES												
7	SELECTION OF PLANTS IN NURSERY												
8	PIT FILLING												
9	PLANATION & GRASS RAISING IN CONTOUR TRENCH												
10	1st WEEDING,MULCHING AND MANUARING OF PLANTATION												
11	PLANTATION GAP FILLING												
12	2nd WEEDING,MULCHING AND MANUARING OF PLANTATION												
13	SOCIAL FENCING OF PLANTATION AREA/ SOURCE CATCHMENT AREA												
14	COMPLETE ALL CACMP WORKS												
15	MEASUREMENT & JIR OF THE COMPLETED WORKS												
16	COMPLETE IPCR OF THE WORKS												
Note: 1. Implementation Scheme cycle depends on the agreement i.e. 6, 9 & 12 Months. 2. Plantation activity depends on scheduled time i.e. rainy season or winter season. 3. Regular O&M should be started after completion of work													

1. Operation & Maintenance:

Operation & Maintenance should be done by GP/ UWSSC/ Community after exit the water supply schemes. Operation & Maintenance plan should be discussed with community by SO/ DIA and Catchment area protection also incorporated with the O &M by-laws of GP/ UWSSC for long term sustainability & fruitful results.

Conclusion:

Effective & proper baseline/preliminary survey & selection of various activities for Catchment Area Management Program (CACMP) will be fruitful for proper implementation for source centered catchment area treatment & long term sustainability of water supply source. Preliminary survey of the catchment area especially in reference of source



depletion, protection, sanitation status, soil erosion and vegetation cover are necessary with every new water supply scheme and all evaluation formats should be attached with each new water supply DPR. On the basis of actual requirement/ demand of treatments, the site of drinking water source for new water supply scheme can be selected for the implementation of catchment area treatment works & separate DEPR can be developed in planning phase.

Dr. Ramesh Badola,
Environment Specialist,
P.M.U. (SWAJAL Project) Dehradun



10th International Agriculture & Horti, Food & Technology and Govt. Achievements & Schemes Expo-2014, New Delhi

10th International Agriculture & Horti Expo, 'Food & Technology Expo' and 'Govt. Achievements & Schemes Expo' were organized by NNS Media Group on 25-26-27 July 2014 at Pragati Maidan, New Delhi. Project Management Unit, Swajal Project Uttarakhand, Participated the expo Under Government Achievements & Schemes Mr. Virender bhatt, Community Development Specialist P.M.U., Mr. Sanjay Pandey,



Training and Communication Specialist P.M.U., Dr. Harshmani Pant, Community Development Specialist D.P.M.U-Dehradun and Mr. Kamlesh Bisht Participated expo on Behalf of Swajal Project Uttarakhand. More then 100+exhibitors participated in the 10 th Food & Technology Expo with special focus on Various Government Achievements & Schemes Welfare & Development Schemes of Central and State Governments & PSEs, Micro, Small & Medium Enterprises (MSMEs), Health, Family Welfare, Women & Child Development, Rural & Tribal Development, Development of North East Region, Development of Khadi & Village Industries and Handicrafts etc., Banks, Financial & Research Institutions, Water Resources & Pollution Control, Power & Energy Sources & Conservation, Autonomous Bodies viz. MCD, NDMC etc. Nearly 10 Government departments participated the expo from Uttarakhand. The expo was inaugurated by Dr.



Jitendra Singh, Hon'ble Minister for Science & Technology, Earth Sciences, PMO, Govt. of India, The Hon'ble Minister visited various stalls and also talked to the exhibitors. He said events such as this spread awareness among the masses about various peoples' welfare schemes of the government. Other dignitaries who visited the show are:



Shri Gauri Shankar Chaturbhuj Bisen, Hon'ble Minister for Farmers Welfare, and Agriculture Development, Govt. of M.P. Dr. Udit Raj, Hon'ble Member of Parliament, Lok Sabha, Shri Sanjeev Chopra (IAS) Jt. Secretary, Ministry of Agriculture, GOI, Shri B. H. Anil Kumar, IAS, Joint Secretary, Ministry of Micro. Small & Medium Enterprises, Govt. of India, Shri Surendra Nath Tripathi, IAS, Joint Secretary, Ministry of Micro. Small & Medium Enterprises, Govt. of India, Dr. S.K. Malhotra, Horticulture Commissioner, Ministry of Agriculture, Govt. of India, Dr. H.P. Kumar, Chairman & Managing Director, NSIC, Govt. of India, Shri Jasbir Singh, Zonal Head (NCR) NSIC, Govt. of India, Shri Manoj Lal, General Manager, NSIC, Govt. of India, Shri P. Uday Kumar, Director, NSIC, Govt. of India, Shri Jitendra Arora, Director, Ministry of Health & Family Welfare, GOI, Shri Rajesh Dubey, Director, MNRE, Govt. of India, Shri Anil Kumar, CPRO, ICAR, Ministry of Agriculture, Govt. of India, Shri S.C. Notiyal, CEO, Directorate of Industries, Govt. of UK, Ch. Naresh Tikait, President of Bhartiya Kisan Union, Dr. Rajeev Chauhan, Chairman, Hiero Bioscience Ltd. Shri Vinay Singhal, Chairman, Mangat Ram Dall Mills and many other senior officers of the central and state governments.

The 'Govt. Achievements & Schemes Expo' was supported by:

Ministry of New & Renewable Energy (MNRE), Govt. of India, Air India, M.R.D.M., APEDA, Ministry of Health & Family Welfare (Govt. of India), NCPAH (Govt. of India), National Small Industries Corporation (GOI), Ministry of Agriculture (Govt. of India), National Horticulture Mission, National Horticulture Board (Govt. of India), National Mission on Micro Irrigation, Rajya Krishi Utpadan Mandi Parishad Uttar Pradesh, National Centre for Cold Chain Development, Govt. of India, Department of Scientific & Industrial Research, Govt. of India, National Cooperative Union of India, Govt. of India, Hiero Bioscience Limited

Seminar and Workshops are organized for the participants on 10th 'Govt. Achievements & Schemes Expo'. Speakers at the Seminar and Workshops Shri B. L. Ram, Director, MNRE, Shri Rajesh Dube, Sr. Executive, MNRE, Dr. G.R. Singh, Dy. Director, Coconut Development Board (GOI), Dr. Ravi Prakash Registrar, PPVFRA, Dr. R. C. Aggarwal, Registrar General, PPVFRA, Dr. A. S. Mishra, Pr. Scientist, ICAR, Sh. T.K. Ghosh, C. Consultant, (NHM) Govt of India, Dr. S.K. Dhankhar, Scientist,





Department of Vegetable Sciences and many other senior scientists from different Departments and Institutions.

New innovations, advancements and developments in the agriculture and horticulture sectors. Thousands of entrepreneurs from the food processing sector from all over India visited the Expo. The visitors used the opportunity to update themselves about the newest developments in the food processing sectors. International Exhibition with Focus on Agricultural & Horticultural Advancements Hi-tech Seeds Fertilizers & Pesticides Agriculture Finance Insurance & Research Institutes, Micro Irrigation & Green House Technologies, North East & Himalayan States, Plant Nurseries & Landscaping, Floriculture & Gardening, Farming Machineries & Equipments, Cold Storage & Warehousing, Herbal & Medicinal Plants Poultry & Animal Feed, Bamboo Cultivation & Applications, Organic Farming. International Agriculture & Horti Expo-2014 provide an excellent platform for State Horticulture Missions; Horticulture Mission for North East & Himalayan States; National Bamboo Mission, Agriculture Departments of Various States; Nodal Agencies; Tractors / Harvesters / Agricultural equipments Manufacturers, International Seeds, Fertilizers, Pesticides Manufacturers; Cultivation, Irrigation & Farming Technologies providers; Fresh & organic Fruits & Vegetable Suppliers; Agribusiness Consultants, Progressive Farmers, Consumers and other government departments to display and discuss their latest innovations in Agriculture and Horticulture sector. Farmers Workshops/ Kishan Gosti are also proposed to be held for active interaction between experts and the farmers.

The 1st day of exhibition is focus on Agricultural & Horticultural Advancements and International Trade; Protected Cultivation (Greenhouse), Irrigation & Farming Technologies; Organic Farming and Fresh Fruits, Vegetables, Cereals etc.

The 2nd day of exhibition is being focus on International Seeds, Fertilizers & Pesticides; Processed Foods & Post Harvest Technologies; Agri Finance, Insurance & Research Institutes; Cold Storage & Technologies.

The 3rd day of exhibition is being focus on Various Government Achievements & Schemes Welfare & Development Schemes of Central and State Governments & PSEs, Micro, Small & Medium Enterprises (MSMEs), Health, Family Welfare, Women & Child Development, Rural & Tribal Development, Development of North East Region, Development of Khadi & Village Industries and Handicrafts etc., Banks, Financial & Research Institutions, Water Resources & Pollution Control, Power & Energy Sources &

Conservation, Autonomous Bodies viz. MCD, NDMC .

The expo received very enthusiastic response from the visitors point of view. Thousands of people from more than 20 states of India including far off states like Kerala, Gujarat, Karnataka, Tamil Nadu, Nagaland, Odisha, Himachal etc. came all the way to visit the expo. The visitors used the opportunity to update themselves about the various schemes, activities and achievements of the government ministries and departments. More than



1000 Visitors Visit to Swajal Projects Stall and informed about the program running by the Swajal Project in Uttarakhand.

The 10th International Agriculture & Horti Expo-2014 concluded with India is a agriculture based economy and the second largest producer of fruits and vegetables in the world and the billion people market with vast opportunities for international and local players in the agriculture & horticulture sector, a high priority sector with a number of fiscal relief and incentives, to encourage commercialization and value addition to agricultural produce; for minimizing wastage, generating employment and export growth.

Sanjay Pandey

Training and Communication Specialist,
P.M.U.-Swajal Project, Dehradun



National Urban Water Award

Uttarakhand Jal Sansthan has received National Urban Water Award (2011-12) for “Water Quality Monitoring in Uttarakhand” in Technical Excellence Category by the Ministry of Urban Development, Government of India on 7th March 2014 at award ceremony held in Vigyan Bhawan, New Delhi.



The National Urban Water Awards (NUWA) was instituted in 2008 with the explicit purpose of honoring urban local governments, water boards and organizations that assist them in taking innovative and significant steps towards effective water management and effecting improvements in service delivery. The Ministry of Urban Development in association with the Administrative Staff College of India (ASCI), Hyderabad has conceptualized and successfully established an annual National Urban Water Awards (NUWA). NUWA is unique in that it honors public and government institutions and recognizes the role of all stakeholders associated with service delivery improvement in urban areas.

Uttarakhand Jal Sansthan (UJS) has been awarded for introduction of a comprehensive water quality monitoring protocol as per IS:10500 across the state of Uttarakhand. Sampling, monitoring and reporting is being carried out as per Service Level Benchmarking Framework of Government of India. A state of the art laboratory with modern equipment was established at Dehradun and twelve more laboratories were established at different locations covering all districts in the state. Training programmes were conducted to support implementation of water quality monitoring protocol. The water samples are being tested and results are being displayed on Government of India website.

The program on National Urban Water Awards was coordinated by Prof. Srinivas Chary Vedala, Director ASCI and the awards were presented by Dr. Sudhir Krishna, Secretary (UD), Ministry of Urban Development, GoI. The team of Uttarakhand Jal Sansthan has received the award.

Er. Neelima Garg

Secretary Appraisal, Uttarakhand Jal Sansthan



Solid & Liquid Waste Management

Multi-Disciplinary Challenges

The concept of waste management becomes one of the key focus of sustainable development principles which is based on policies and practices. In definitional terms solid and liquid waste management (SLWM) is the collection, transport, processing, recycling or disposal of waste materials usually ones produced by human activity in an effort to reduce their effect on human health or local aesthetics or amenity.

Waste (both solid and liquid) generated in rural areas is predominantly organic and biodegradable yet becoming a major problem to the overall sustainability of the ecological balance. As a result, in the absence of proper disposal of solid and liquid waste they are leading to vector born diseases such as diarrhoea, Malaria, Polio, Dengue, Cholera, Typhoid, and other water borne infections. Close to 88% of the total disease load is due to lack of clean water and sanitation and the improper solid and liquid waste management- which intensify their occurrence.

Global statistics show:

- 1.8 million People die every year from diarrheal diseases (including cholera); 90% of them are children under 5, mostly in developing countries.
- 1.3 million people die of malaria each year, 90% of whom are children age under 5.
- An estimated 160 million people are infected with schistosomiasis. It is strongly related to unsanitary excreta disposal and absence of safe water sources.
- 133 million people suffer from high intensity intestinal helminthes infections, which often lead to severe consequences such as cognitive impairment, massive dysentery, or anemia. Access to safe water and sanitation facilities and better hygiene practice can reduce morbidity from as cariasis by 29% and hookworm by 4%.

(Source WHO)

1.1 The “Waste” Problem: Past and Present: Man has always generated waste materials for which he could not find any use or products which have reached the end of useful life. Although this was going on throughout the ages, it was not a problem until recent times because natures own waste treatment processes like dispersion, dilution and degradation, which took care of these problems. Wastes left on land decayed by spontaneous chemical and degradation process thereby the balance of nature was maintained.

The situation today is not so simple. The problem is due to both quantitative and qualitative nature of the wastes we are producing. The natural degradation processes are



slow and can take care of only a limited amounts and specific kinds of wastes. The obnoxious fumes produced today by the so called civilized society are too much for the atmosphere to get dispersed, especially in urban environment. The rivers are not able to dilute and degrade sufficiently the vast amount of industrial effluents dumped every day into them. And one would have to wait a long time for heaps of junk metallic material dumped to blend in with the earth's crust again as ores. This will not happen because we are dumping wastes faster than nature can degrade and absorb them. Further, many of the modern waste materials like plastics and detergents are non biodegradable. All these are going to cause serious threat to our ecosystem.

Waste or Resource

While one way of looking at waste is to treat it as useless material, another viewpoint is that it can be converted into a different form which can then be productively used. The latter view treats waste as a resource. The three 'R's of waste management Reduce, Reuse, Recycle emanate from this point of view. As waste management can be logistically difficult and expensive, it is advisable to manage the 'waste' after all three R options have been considered.

1.1 What is Waste: Any material/liquid that is left over after productive use or which is beyond any use in its current form and is generally discarded as unwanted. Material linked to human activity in comparison to nature which has its own system of recycling waste such that it eventually becomes a resource: for example organic matter such as leaves, branches and so on decompose to form manure.

Solid Waste

Any waste other than human excreta, urine and wastewater is called solid waste. Solid waste can be classified into two types: biodegradable and non-biodegradable.

- Biodegradable waste is that which can be decomposed by biological processes, for example, vegetable peel, food, farm waste, and so on. Organic waste is biodegradable and can be recycled; and
- Non-biodegradable waste cannot be broken down by biological processes, for example, paper, glass, metal, and so on. Non-biodegradable waste can be further classified into two types: recyclable and non-recyclable
- Recyclable waste is that waste which has economic value that can be recovered, for example, metal, paper, glass, plastic bottle, and so on.
- Non-recyclable waste is that waste which does not have economic value of recovery, for example, tetra packs, thermocol, and so on.

Waste Water

Liquid waste is water which has been used once and is no longer fit for human consumption or other uses where clean water is required. Broadly, There are two types of waste water generated. These are:

- Grey water is waste water from bathroom, washing of clothes and kitchen. Depending on its use, water can require less treatment than black water and generally contains fewer pathogens. Treated water can be reused for garden watering, fodder raising and kitchen gardening.
- Black water is water that has been mixed with waste from the toilet. Black water requires biological or chemical treatment and disinfection before re-use.



1.3 Solid Waste Management: For management purpose solid waste may be classified as bio degradable and non biodegradable. Waste which can be decomposed by biological processes is known as **“Biodegradable waste”**. Organic waste is biodegradable and recyclable. Biodegradable waste can be decomposed in two ways

a. **Aerobic (with oxygen)**

b. **Anaerobic (without oxygen).**

a. **Aerobic decomposition:** Such decomposition process takes place in the presence of air. In this process aerobic bacteria act on the complex organic matter and break it down into nutrients. In this process primarily carbon-dioxide is produced.

b. **Anaerobic decomposition:** Such decomposition process takes place in the absence of air. In this process, anaerobic bacteria act on the complex organic matter and break it down into nutrients. In this process primarily methane and carbon-dioxide gases are produced. Waste which cannot be decomposed by biological process is known as **“Non-biodegradable Wastes”**. Most of the inorganic waste is non-biodegradable. Non-biodegradable wastes which can be recycled are known as “Recyclable waste” and those which cannot be recycled are known as “Non-recyclable waste”.

Biodegradable and recyclable	Non-biodegradable	
	Recyclable	Non-recyclable
Kitchen Waste	Plasticscarry bags, milk covers PVC pipes etc. Syringes, Glucose bottles etc. Cotton and nylon cloth Tyres & Tubes	Nitrogen sealed packing for chips
Food, Cow dung/ animal waste, Agricultural, Leaves Vegetable Peels, Dead animals, Paper, Wood	Shampoo, Bottles, Glass Books/ notebook, Wires, Cap of bottle, Plastic, Tin can, Metal Ash/dirt	Tetra packs, Thermocal, Plastic coated cards, Packing materials (plastic) for food packing mineral water bottles.

1.4 Effective Management of Solid Waste:

1. **Management of Household Level Solid Waste:** As far as possible, solid waste should be managed at the household level so that zero or minimum community waste is generated. This may involve the following steps:

A. **Sorting out or segregation at household level:**

- Household waste should be sorted out or segregated at the source i.e. at the household level.



- This is to be done by generating awareness to sort out waste at the household level by keeping bio degradable and non bio degradable waste in separate colour bins of 5 to 10 liters capacity each (e.g. green color bin for bio degradable waste and blue bin for non bio degradable waste).
- Reusable segregated non biodegradable waste may be reutilized at household level.

B. Treatment/ Management of biodegradable household level waste: Efforts should be made to treat the segregated bio degradable waste at the household level by adopting any one of the following technologies and reuse the treated products:

- Composting
- Vermi composting
- Biogas plant.

C. Treatment/management of household level non biodegradable waste: Some of the sorted out non bio degradable waste will be of recyclable type. Households may be encouraged to keep such waste separately and sell to the rag pickers and kabadiwalas and keep the non-recyclable products for subsequent transportation for community level management.

2. Management of Community Level Solid Waste: In those villages where all the waste cannot be managed at household level, segregated and non-managed household waste need to be transported either to the community bins at the village level or to the treatment plant sites at community level where household level bio degradable waste can be treated by community treatment plant and recyclable and non bio degradable waste can be sorted out and sold to the kabadiwalas by gram panchayats. Waste which cannot be composted, reused or recycled may be disposed at community level at the landfill sites.

1.5 Solid Waste Management:

1. Composting (Manure Pit)

A. Household Level Composting

At each household, two manure pits should be dug. The size of the pit will depend upon the quantity of refuse to be disposed of per day. Each day the garbage, cattle dung, straw, plant and agriculture wastes are dumped into the manure pit. When one pit is closed the other one is used. In 5 to 6 months time, the refuse is converted into manure, which can be used in the fields.



1. Underground unlined manure pit or garbage pit
2. Under ground brick lined manure pit or garbage pit
3. Over ground heap
4. Over ground brick lined compost tank

B. Community level composting

Community level composting may be resorted to when management of solid waste at household level is not possible. For community level composting, Panchayat should select a suitable site as Compost Yard for the village. Site should be selected taking into consideration wind flow direction, so that the inhabited areas don't get any foul odour.

The site should be easily accessible for transportation of waste and manure. It should not be a low lying area to avoid water logging.

1. Underground *unlined* manure pit or Garbage Pit
2. Vermi composting at Community Level
3. Vermi tank at Community Level

1.6 Waste Water Management: Disposal of waste water is a major public health problem in rural areas. Stagnant waste water smells bad and also acts as breeding place for mosquitoes resulting in spread of diseases like dengue, malaria, filaria etc. Proper disposal and also reuse of waste water wherever possible will help in combating diseases as well as meeting water scarcity.

a. Sources of Waste Water:

- From domestic use e.g. from toilet, bathroom, washing of clothes and from kitchen.
- Community e.g. from industry, commercial and business activities, institutions, healthcare establishments, market places, farming activities etc.

b. Waste water management at household level: From the analysis of the sources of waste water and its types, it is revealed that more than 90 percent of waste water generated is grey water. Therefore, grey water management is a major challenge in rural areas in the country. Water management may involve reuse/ recycling of water after appropriate treatment for a variety of purposes including irrigation, domestic purposes and toilet flushing. It will always be better to manage and treat domestic grey water generated in the house in the



area/courtyard/land surrounding the house. The following technological options will be suitable for this purpose:

- Kitchen Garden with piped root zone system
- Kitchen Garden without piped root zone system
- Leach pit
- Soakage pit.

c. Community Level Management at Public Places-On Site: Community level grey water can be divided in two types:

- a. Grey water in rural areas in public places like public stand posts for water supply, wells, hand pumps, schools etc.
- b. Greywater from houses which can not be managed at domestic level.

The grey water from public places would have minimum quantity of pollutants. While domestic greywater which becomes community greywater in due course, will have grease, kitchen waste water, food particles, bathing and clothes washing water, silt etc.,

Effective SLWM Principles

A GP-led approach with the complete involvement of the community can be an effective vehicle to tackle the rural waste management problem. A clean environment is a public good and, to achieve this, there must be a demand at a collective level in a community to manage waste safely. This approach is based on the following principles:

- Community participation and ownership, based on a felt need through a participatory process.
- Building capacity at the local level to manage and maintain facilities.
- Promotion of a variety of technologies that are user-friendly and affordable.
- Promotion of.
- Segregation at source of solid waste (biodegradable and non-biodegradable) and liquid waste (gray water and black Household based treatment and management, as a first option, and community-based collection, treatment and disposal systems, as the second option, based on the principle that waste should be treated as close to the source as possible.
- Involvement of community-based groups (for example, youth clubs, self-help groups (SHGs), mahila mandals) in waste management operations.
- Involving recyclers (for example, *kabadiwalas*) as partners.
- Emphasis on adoption of recycling/reuse options.
- Developing an effective financial model to address capital and operational cost and;
- Creating incentives for motivation and sustainability.



Waste to Wealth

While there may be income opportunities from converting waste to other uses, it should be understood and accepted that the first priority of waste management should be to dispose the waste safely so that the threat to human health is reduced, economic value derived from the waste should be seen as an additional benefit.

1.7 Sources for SLWM

- **Household:** Households if mobilized effectively from health and economic points of view they can provide support, especially for household level interventions and complete or partial support in case of community level interventions. Poor households may not be able to provide financial support but may extend support in the form of voluntary labor, if required.
- **Award Money:** The award money from NGP and several other state specific awards can be channeled to support SLWM.
- **Gram Panchayat:** The current financial base of GPs has improved over the years with the introduction of several forms of taxes and revenue generation streams (for example, rental from shops, lease of lands, and so on). Depending on their financial health, GPs can be a good source of funding. Government There are many government schemes and programs that can provide financial support.
- **Schemes/ NBA:** Funds under NBA, supported by the Ministry of Drinking Water and Sanitation, are available for Programs both hardware and software activities with partial support of households and communities;
- **Mahatma Gandhi National Rural Employment Guarantee Act:** Supported by the Ministry of Rural Development, the funds under this program are a good source for constructing drainage, soak pits and SLWM activities.
- **13th Finance Commission Award:** The Commission has specifically recommended use of grants in the areas of sewerage and solid waste management;
- **Sarva Shiksha Abhiyan, Integrated Child Development Services, Mid Day Meal Scheme:** Funds from these schemes can also be mobilized to support SLWM in schools and anganwadis.



- **National Biogas and Manure Management program:** The program run by the Ministry of New and Renewable Energy provides financial support for the construction of biogas plants and toilet-linked biogas plants along with partial support for software activities.
- **National Project on Organic Farming:** The project is supported by the Department of Agriculture and Cooperation, Ministry of Agriculture, and provides funds for capital investment to set up agro-waste compost units.
- **Sponsorship Responsibility (CSR) initiatives.** Their CSR funds could also be mobilized to support SLWM activities.

These resources can be converged especially at district, block and GP levels to ensure an integrated pool of resources for SLWM initiatives.

Household based treatment and management as a first option and community-based collection, treatment and disposal systems as the second option based on the principle that waste should be treated as close to the source as possible.

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अनुक्रमणिका



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संपादकीय

संविधान के 73वें संशोधन की मूल भावना के अनुरूप सत्ता का विकेन्द्रीकरण तथा त्रिस्तरीय पंचायती राज संस्थाओं को सशक्त, सुदृढ़ एवं प्रभावी बनाने के लिए स्वजल परियोजना जनसहभागिता आधारित एक सामुदायिक जलापूर्ति उपलब्ध कराने की योजना है, जिसके अन्तर्गत माँग आधारित सिद्धान्त की अवधारणा को समुदाय के माध्यम से ही योजनाओं का चयन, निरूपण, क्रियान्वयन, प्रबन्धन का कार्य एवं जलापूर्ति के साथ ही पर्यावरणीय सुधार की दृष्टि से जल निकास प्रबन्धन तथा सामुदायिक स्वास्थ्य एवं पर्यावरणीय स्वच्छता संवेतना, महिला एवं निर्बल वर्ग विकास पहलु जैसे; महत्वपूर्ण विकास के अवयव को सम्मिलित किये जाने के सकारात्मक प्रयास का परिणाम स्वजल समाचार की विषय—वस्तु है। यह पत्रिका पेयजल एवं स्वच्छता सैक्टर में सुधार की नीति को सकल क्षेत्र में समरूप नीति (स्वैप) के द्वारा विभिन्न स्तर पर नीतिगत व्यवस्थायें व उपभोक्ताओं द्वारा पेयजल योजना निर्माण एवं स्वच्छता में भागीदारी की मिसालों से परिचित होने का एक मंच है।

उत्तराखण्ड पर्वतीय गाँवों का प्रदेश है यहाँ की कुल जनसंख्या का लगभग 69.45 प्रतिशत भाग ग्रामीण क्षेत्रों में निवास करता है। गाँवों में बुनियादी सुविधाओं को मजबूत करने के लिए प्रदेश सरकार द्वारा विभिन्न योजनाओं का शुभारम्भ किया गया है। अब तक परियोजना में कुल 1394 पेयजल योजनाओं द्वारा 1297 ग्राम पंचायतों को लक्ष्य के सापेक्ष शत—प्रतिशत आच्छादित किया गया है। इन योजनाओं के क्रियान्वयन हेतु जन—सहभागिता को आधार बनाया गया है। प्रदेश के ग्रामीण अंचलों के विकास के लिए ग्रामीण सहभागिता के अंश को पहली प्राथमिकता दी गयी। परियोजना द्वारा स्वच्छता एवं पर्यावरणीय स्वच्छता को ध्यान में रखते हुये शौचालय निर्माण तथा ठोस एवं तरल अपशिष्ट प्रबंधन हेतु ग्रामीणों को प्रशिक्षित किया जा रहा है, फलस्वरूप ग्रामीणों में स्वास्थ्य एवं स्वच्छता को लेकर जागरूकता उत्पन्न हुई हैं जिससे ग्रामीण आदर्श ग्राम की अवधारणा को अपनाते हुये अपने ग्राम को निर्मल ग्राम बनाने हेतु प्रयासरत हैं।

हमारा अनुरोध है की आगामी अंकों हेतु हमें बच्चों, विद्यार्थियों, शिक्षकों, इंजीनियरों, जनप्रतिनिधियों, स्वयं सेवी संस्थाओं व आमजन से भी इस पत्रिका हेतु उनके सुझाव, लेख व टिप्पणियाँ मिले, ताकि राज्य के जागरूक नागरिकों के साझा प्रयासों से पेयजल एवं स्वच्छता सेवाओं के स्थायित्व हेतु किये जा रहे प्रयास सम्मुख आ सकें।

सुगमकर्ता उपभोक्ता पेयजल एवं स्वच्छता उपसमितियों ने प्रयास कर अपने गांवों को खुले में शौच की प्रवृत्ति पर विराम लगाकर सामुदायिक अभिप्रेरणा से शौचालयों का निर्माण करवाया है। पेयजल आपूर्ति की दृष्टि से अभावग्रस्त क्षेत्रों में समुदाय ने अपनी योजनायें खुद बनाकर तथा संचालन एवं रखरखाव कर यह सिद्ध कर दिया है कि कोई भी कार्यक्रम जनसहभागिता के बिना सफल नहीं बन सकता है। सामुदायिक स्तर पर इस तरह के प्रयासों से राज्य के गाँवों सफलता की ओर प्रयासरत है। स्वजल परिवार की ओर से नववर्ष की शुभकामनाओं सहित।

सम्पादक मण्डल

टीम भावना कितनी महत्वपूर्ण

भारत निर्माण जन सूचना के अन्तर्गत दिनांक 24.10.2013 से 26.10.2013 तक रीठा पोखरा विकासखण्ड—रामगढ़ जनपद नैनीताल में कार्यक्रम आयोजित किया गया, जिसके तहत समस्त विभागों उदाहणार्थ; स्वजल परियोजना, शिक्षा, स्वास्थ्य, उद्यान, कृषि, समेकित बाल विकास परियोजना, वानिकी एवं सहयोगी संस्थाओं तथा स्वयं सहायता समूहों द्वारा आकर्षक स्टॉल लगाये गये।



उक्त कार्यक्रम में उपस्थित विशाल जन समुदाय को सम्बन्धित विभागों द्वारा अपने-अपने कार्यक्रमों की जानकारी सम्बोधन एवं स्टॉल के माध्यम से दी गयी। जिला परियोजना प्रबन्धन इकाई, स्वजल परियोजना, भीमताल जनपद नैनीताल के स्टॉल का मुख्य आकर्षण का केन्द्र असरदार टूल्स व शौचालय तथा वर्षा जल संग्रहण टैंक का मॉडल रहा। जिसको ग्रामीण महिलाओं, स्कूली बच्चों, बुजुर्गों तथा युवाओं द्वारा

सराहा गया। स्वजल परियोजना द्वारा पम्पलेट, पोस्टर आदि वितरित कर कार्यक्रम की जानकारी का प्रचार—प्रसार किया गया।

कार्यक्रम के अन्तिम दिवस पर समस्त स्टॉलों का अवलोकनकर्ता टीम द्वारा अवलोकन कर स्वजल स्टॉल को प्रथम पुरस्कार से नवाजा गया। जो स्वजल के लिए गौरव का विषय है। पुरस्कार में प्रशस्ति पत्र एवं ट्रॉफी मा. सांसद के.सी. सिंह बाबा द्वारा प्रदान किया गया। जिसका श्रेय स्वजल टीम को जाता है। सभी सदस्यों ने पूरे मनोयोग से स्टॉल सजाकर अपने-अपने स्तर से जानकारी देने का सराहनीय कार्य किया। वास्तव में टीम भावना/कार्यों में हम सभी अपने आप को सबसे बेहतर साबित करने में सक्षम हो सकते हैं।





संचालन एवं रखरखाव: सफलता की कहानी बुडवा-लैणी, ग्राम पंचायत - लैणी-पेयजल योजना

उत्तराखण्ड में गढ़वाल क्षेत्र का अधिकांश भू-भाग पर्वतीय है जहां मैदानी क्षेत्र की अपेक्षा पेयजल की गंभीर समस्या बनी रहती है। जनपद टिहरी गढ़वाल के विकासखण्ड भिलगना की ग्राम पंचायत बुडवा का राजस्व ग्राम लैणी उत्तर, पूर्व एवं दक्षिण से अखरोट, भीमल, घने चीड़ के पेड़ों से घिरा हुआ है। ग्राम पंचायत बुडवा-लैणी, नई टिहरी से घनसाली 60 कि.मी., घनसाली से 12 कि.मी. दूर घुत्तु रोड़ पर मुख्य सड़क मार्ग से 1 कि.मी. की दूरी पर स्थित है। बुडवा-लैणी ग्राम पंचायत, विकास खण्ड भिलगना, जनपद टिहरी गढ़वाल में पेयजल योजना के निर्माण से पूर्व पेयजल की गंभीर समस्या थी। ग्रामवासियों को पेयजल के लिये अत्यधिक दूर से पेयजल की आपूर्ति करनी पड़ती थी, जिसका बच्चों और महिलाओं के दैनिक जीवन पर विपरीत प्रभाव पड़ता था। ग्रीष्मकाल में पानी की समस्या अधिक विकट हो जाती थी। ग्राम पंचायत की बैठक में मांग आधारित प्रस्ताव पारित कर डी.पी.एम.यू. को उपलब्ध करवाया गया। ग्राम लैणी से 3 कि.मी. की दूरी पर स्रोत की उपलब्धता थी इसी स्रोत पर लैणी ग्रामवासियों की अपने ग्राम हेतु पेयजल योजना बनाने की सहमति बनी। यह स्रोत जंगल में घने बांज, बुरांश एवं अन्य हरे भरे पेड़ पौधों से घिरा हुआ है, जिससे स्रोत में पानी का स्राव 30-40 एल.पी.एम. सदाबहार बना रहता है।

ग्रीष्मऋतु में तापमान 20-30 डिग्री सेण्टीग्रेड तथा शीतकाल में तापमान 5 से 15 डिग्री सेण्टीग्रेड तक रहता है। ग्राम पंचायत बुडवा की अधिकतम जनसंख्या कृषि पर निर्भर है जिसमें धान, गेहूँ तथा दलहनी फसलों के अतिरिक्त आलू, नाशपाती, नींबू, अखरोट आदि का उत्पादन होता है। ग्राम पंचायत में 1 प्राथमिक विद्यालय है जिसमें 20 बच्चे हैं। ग्राम में वर्ष के माह जुलाई से सितम्बर तक अत्यधिक वर्षा होती है। विश्व बैंक पोषित स्वजल परियोजना प्रथम चरण वर्ष 1996 में प्रारंभ हुआ था। इसी चरण में ग्राम पंचायत बुडवा-लैणी की लैणी पेयजल योजना वर्ष 1999-2000 में निर्मित हुई थी। लैणी में उपभोक्ता समिति एवं ग्रामवासियों/लाभार्थियों द्वारा आपसी सहभागिता के साथ पेयजल योजना के कुशल संचालन एवं रखरखाव के लिये ₹20 से ₹30 तक प्रति परिवार प्रतिमाह जमा किया जा रहा है। वर्तमान में लैणी उपभोक्ता समिति के रखरखाव खाते में ₹25000/- जमा है। समय-समय पर बैठक में समिति द्वारा जमा धनराशि व व्यय धनराशि की पूर्ण जानकारी प्रदान की जाती है जिससे पूर्ण पारदर्शिता बनी रहती है।



लैणी उपभोक्ता पेयजल एवं स्वच्छता उपसमिति के अध्यक्ष श्री सुन्दरलाल उनियाल की अध्यक्षता में प्रतिमाह बैठक की जाती है। बैठक में सर्वसम्मति से श्री गोविन्दराम को सामुदायिक तकनीशियन नियुक्त किया गया है। श्री गोविन्दराम लैणी पेयजल योजना की देखरेख एवं प्रत्येक परिवार से प्रतिमाह जमा की जाने वाली रखरखाव धनराशि को जमा करने का काम करते हैं। ग्राम लैणी में कुल 45 परिवार निवास करते थे जिनमें से 10 परिवार बाहर बस गये हैं। वर्तमान में 35 परिवार ही निवास कर रहे हैं एवं 35 परिवारों द्वारा रखरखाव धनराशि दी जाती है। सार्वजनिक स्टैंडपोस्ट से पानी लेने वाले परिवारों द्वारा ₹15/- प्रतिमाह एवं व्यक्तिगत स्टैंडपोस्ट से पानी लेने वाले परिवारों से ₹30/- धनराशि जमा की जाती है। सामुदायिक तकनीशियन श्री गोविन्दराम द्वारा जानकारी दी गयी कि माह जुलाई से रखरखाव धनराशि बढ़ाने पर विचार किया जा रहा है, समिति की बैठक में यह निर्णय लिया जायेगा। सामुदायिक तकनीशियन श्री गोविन्दराम को समिति द्वारा प्रतिमाह मेहनताना ₹500/- से बढ़ाकर ₹800/- कर दिया गया है, जिसका भुगतान रखरखाव खाते से किया जाता है। ग्राम लैणी में पेयजल सुचारु रूप से चल रहा है एवं प्रत्येक परिवार को पानी पर्याप्त मात्रा में मिल रहा है। श्री गोविन्दराम का परिवार घर में रहकर पशुपालन एवं कृषि कार्य करता है।

श्री गोविन्दराम सामुदायिक तकनीशियन द्वारा बताया गया कि रखरखाव खाते में जमा धनराशि को समय-समय पर निकालकर ब्लीचिंग पाउडर लाने एवं योजना में टूट-फूट होने पर खर्च किया जाता है।

समिति अध्यक्ष श्री सुन्दरलाल, श्री गोविन्दराम सामुदायिक तकनीशियन एवं ग्रामवासियों द्वारा कहना था कि स्वजल प्रथम चरण के अन्तर्गत निर्मित इस प्रकार की योजना अन्य ग्राम पंचायतों के लिये आज भी प्रेरणा का स्रोत है।

उपभोक्ता पेयजल एवं स्वच्छता उपसमिति द्वारा योजना के संचालन हेतु ग्राम पंचायत स्तर पर नियमावली बनाकर प्रतिमाह एक निश्चित धनराशि जमा की जा रही है जिससे योजना के प्रति लोगों में अपनत्व की भावना आज भी बनी हुई है।

शैलेन्द्र सिंह रावत,
सामुदायिक विकास विशेषज्ञ,
डी.पी.एम.यू.—नई टिहरी



महिलाओं में मासिक ऋतुस्राव (Menstruation) के दौरान सफाई के तरीके

“Awareness about menstruation and body functions, proper use of hygienic products to manage the menstrual flow and proper disposal of used products ensures a sustainable and easy solution to a seemingly complex. Let us enjoy this period without any embarrassment or fear. Happy growing up!”

(मासिक स्राव को व्यवस्थित रखने के लिये महिलाओं को मासिक स्राव तथा तत्सम्बन्धी शारीरिक प्रक्रियाओं, स्वास्थ्यप्रद उत्पादों का उचित प्रयोग तथा उनके निस्तारण की जानकारी, उनकी एक सम्भावित जटिल समस्या का हानिरहित उपाय है। इस समय बिना शर्म अथवा भय के निश्चिन्त रहना चाहिये।)

माहवारी (menstruation) के विषय में भ्रान्तियाँ एवं सामान्य जानकारी:— महिलाओं में ऋतुस्राव के समय विशेष सफाई की आवश्यकता होती है। मासिक स्राव के समय प्रयोग होने वाले आधुनिक उत्पादों तथा उनके प्रयोग की उचित जानकारी होने से संक्रमण से बचा जा सकता है। मासिक स्राव के दौरान विभिन्न भ्रान्तियाँ भी विद्यमान हैं। उदाहरणार्थ: कुछ समुदायों में मान्यता है कि ऐसे समय में मन्दिर में नहीं जाना चाहिए, खाना नहीं बनाना चाहिए अथवा घर के बाहर रहना चाहिए आदि। जबकि वास्तविकता यह है कि महिलाओं के लिये यह एक आवश्यक एवं स्वाभाविक प्राकृतिक प्रक्रिया है। उपरोक्त तथा किसी अन्य प्रकार की भ्रान्तियाँ आनावश्यक तथा अवैज्ञानिक हैं एवं अज्ञानता का सूचक हैं।

महिलाओं तथा बालिकाओं को इसके बारे में समुचित जानकारी का होना नितान्त आवश्यक है। उचित जानकारी होने के बाद ही उनमें हीनभावना व शर्म को दूर किया जा सकता है, तथा लापरवाही के कारण होने वाले संक्रमणों से बचा जा सकता है।

माहवारी के समय आवश्यक स्वास्थ्यप्रद तरीके:— इस समय सफाई का विशेष ध्यान रखना आवश्यक होता है, क्योंकि रक्तस्राव के समय सफाई न होने से बैक्टीरिया के संक्रमण की सम्भावना अधिक होती है। रक्तस्राव लगभग तीन दिन होता है। इन दिनों में निम्नलिखित सफाई के तरीके अपनाना आवश्यक है:—

1. **स्नानः**— प्रतिदिन कम से कम एक बार स्नान करना चाहिए। स्नान के समय रक्त जननांग के आसपास की त्वचा के बीच रुका रहता है, जिससे संक्रमण तथा दुर्गन्ध की सम्भावना रहती है। अतः इसे साफ करना आवश्यक है।



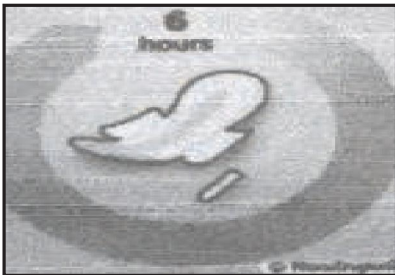
नियमित स्नान करें

2. **अन्तः वस्त्रों की सफाई**— अन्त वस्त्र (Undergarments) साफ होना चाहिये तथा उन्हें नियमित रूप से बदलते रहना चाहिए। अन्त वस्त्र गन्दे होने से संक्रमण का खतरा रहता है।



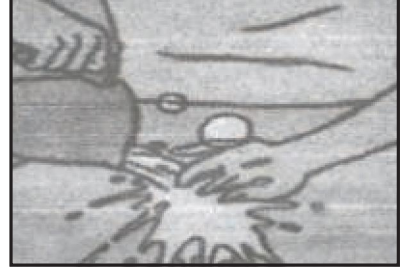
स्वच्छ अधोवस्त्र पहनें

3. **पैड का प्रयोग**— पैड (Pads) को नियमित बदलते रहना चाहिये। सामान्यतया 06 घण्टे में पैड (Pads) बदल लेना चाहिये। यदि भारी रक्त स्राव हो तो पैड को जल्दी-जल्दी बदलना चाहिए क्योंकि वह शीघ्र ही संतृप्त (Saturate) हो जाता है, तथा रक्त पैड के बाहर बहकर गन्दगी फैलाता है। इसके अलावा त्वचा को गीला रखता है, जिससे योनि इन्फेक्शन (Vaginal infection) तथा त्वचा में छाले (Rashes) होने का अन्देश पैदा हो जाता है। अतः पैड को नियमित रूप से बदलते रहना आवश्यक होता है।



पैड को नियमित रूप से बदलें

4. **जननांग क्षेत्र की विशेष सफाई**— शौच अथवा मूत्र त्याग के बाद जननांग के क्षेत्र को सामान्य पानी (बिना साबुन) से साफ करना चाहिए।



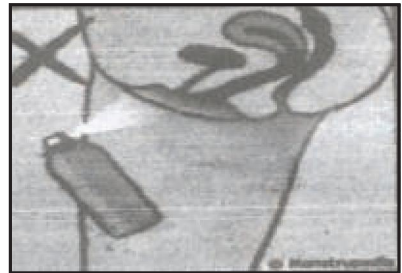
जननांगों को साफ रखें

5. **जननांग अधोकटि क्षेत्र (Groin Area) की देखभाल**— जाघों के बीच का क्षेत्र स्वच्छ तथा सूखा रखना चाहिए, इसके लिये साफ व सूखे तौलिये का प्रयोग करना चाहिए। सफाई/धोने की सही विधि का प्रयोग करना चाहिए अर्थात् हाथ की गति योनि से मलद्वार की तरफ होना चाहिये न कि मलद्वार से योनि की तरफ।



अधोकटि क्षेत्र को साफ व सूखा रखें

6. **योनि में स्वच्छक पदार्थ का प्रयोग वर्जित**— याद रखना चाहिए कि प्रकृति ने योनि को संक्रमण से बचाने के लिये स्वतः पैदा होने वाले पदार्थों का तन्त्र (Mechanism) बनाया है। ये स्वतः निकलकर उसे संक्रमण से बचाते हैं। अतः किसी भी स्वच्छक पदार्थ जैसे; साबुन अथवा दुर्गन्ध निवारक द्रव्य का इसके अन्दर प्रयोग नहीं करना चाहिए।



योनि में स्वच्छक पदार्थ का प्रयोग न करें



स्वास्थ्य रक्षा विषयक (सैनेटरी मैटेरियल):— निम्नलिखित तालिका में विभिन्न सैनेटरी मैटेरियल के बारे में प्रकाश डाला गया है। इनके लाभ—हानियों का भी वर्णन किया गया है:—

सैनेटरी मैटेरियल	लाभ	हानि
प्राकृतिक वस्तुएं जैसे: धूल, मिट्टी, पत्तियां आदि। कपड़े की पट्टियां	<ol style="list-style-type: none"> 1. यह मुफ्त में मिल जाते हैं। 2. स्थानीय रूप से उपलब्ध है। 1. आसानी से सुलभ। 2. साफ करके पुनः प्रयोग किया जा सकता है। 	<ol style="list-style-type: none"> 1. इससे संक्रमण का बहुत बड़ा खतरा है। 2. इस्तेमाल करने में परेशानी। 1. यदि पुराने कपड़ों को अच्छी तरीके से सफाई नहीं की तो वे हानिकारक हो सकते हैं। 2. ऐसे प्रयोग किये गये कपड़ों को साफ करके सुखाने के लिये एकान्त स्थान की आवश्यकता होती है।
टायलेट पेपर या टिशू	स्थानीय बाजार में आसानी से उपलब्ध।	<ol style="list-style-type: none"> 1. गीला होने पर कमजोर हो जाता है, जिससे अलग होकर गिर सकता है। 2. उचित स्थान पर रूके रहना कठिन है। 3. गरीब उपयोगकर्ता के लिये मंहगा हो सकता है।
पुनरोपयोगी पैड्स लागत मूल्य का अधिकतम लाभ देने वाला	<ol style="list-style-type: none"> 1. स्थानीय स्तर पर उपलब्ध। 2. डिस्पोजिबल पैड की अपेक्षा पर्यावरणीय दृष्टि से अधिक उपयोगी है। 3. पुनर्प्रयोज्य होने के कारण (Cost Effective) है। 	<ol style="list-style-type: none"> 1. उपयोगकर्ता पैड को धोकर सुखाने हेतु प्राईवेट स्थान तथा पानी व साबुन आवश्यक है। 2. व्यापक स्तर पर उत्पाद करने पर उपभोक्ताओं की खरीद क्षमता का हो सकता है।
पेन्टीज / अन्डर वियर (Panties/ Underwear)	<ol style="list-style-type: none"> 1. सैनेटरी मैटेरियल को उचित स्थान पर रखने में सहायक। 2. जननांग क्षेत्र को स्वास्थ्य प्रद रखने में उपयुक्त है। 	<ol style="list-style-type: none"> 1. सम्भावित उपयोगकर्ताओं को इनकी कीमत महसूस होती है। 2. सस्ती इलास्टिक होने पर शीघ्र बेकार हो जाती है।
1. डिस्पोजिबल सैनेटरी पैड्स	<ol style="list-style-type: none"> 1. खरीदने के लिये सस्ते दरों पर भी उपलब्ध हैं। 2. इस्तेमाल में आसानी होती है। 3. चलते-फिरते समय गिरने का भय नहीं रहता। 4. साफ करने का झंझट नहीं होती है। 5. निस्तारण में आसानी होती है। 	



सैनेटरी मैटेरियल का निस्तारण:—

सैनेटरी मैटेरियल का निस्तारण कूड़े के ढेर में करना उचित रहता है। कभी-कभी कतिपय स्थानों में इस प्रयोजन हेतु विशेष प्रकार का ड्रम उपयोग किया जाता है, जिसमें सैनेटरी मैटेरियल को जलाने की विशेष व्यवस्था रहती है। किसी भी दशा में सैनेटरी मैटेरियल को कमोड में नहीं फेंकना चाहिए, ऐसा करने से लैट्रीन चोक हो जाती है। सामान्यतया नैपकिन्स अथवा डिस्पोजिबल नैपकिन्स का प्रयोग किया जाता है। अतः उनके निस्तारण पर प्रकाश डाला जा रहा है।

प्रत्येक प्रकार के नैपकिन, चाहे वे कपड़े का हो अथवा नैपकिन पैड हो, उसका उचित तरीके से निस्तारण किया जाना आवश्यक होता है। निस्तारण की उचित व्यवस्था न होने से एक ओर जहां रोग फैलने की सम्भावना रहती है, वहीं दूसरी तरफ महिलाओं में शर्म की भावना पैदा होती है। सामान्यतया निस्तारण के लिये नैपकिन को न्यूज पेपर अथवा रद्दी पेपर में लपेटकर इसे ट्वायलेट अथवा अन्य जगह पर रखे गये डस्टबिन में डाल देना चाहिये। इसके लिये प्रत्येक महिला शौचालयों में रद्दी न्यूज पेपर तथा डस्टबिन अवश्य रखे जाने चाहिये।

विद्यालयों में बालिका शौचालयों में ऐसी व्यवस्था न होने से लड़कियां नैपकिन्स को टायलेट के कमोड में डाल देती हैं अथवा यूरिनल पाट की प्रवाही नाली में डाल देती हैं, जिससे टायलेट का ड्रेनेज चोक हो जाता है।

यदि नैपकिन को खुले में फेंक दिया जाता है अथवा कूड़े के ढेर में फेंका जाता है तो अनेक अस्वास्थ्यकर समस्याएं पैदा हो सकती हैं।

अतः घर में तथा विद्यालयों में नैपकिन्स के डिस्पोजल हेतु उचित व्यवस्था अनिवार्य रूप से होनी चाहिये।

1. घर पर नैपकिन्स का निस्तारण (Disposal in House):—

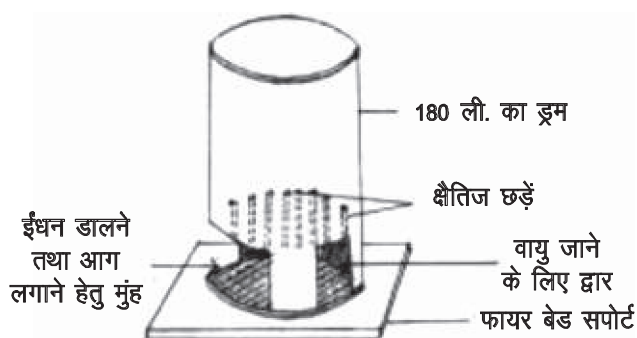
घर के शौचालय में एक डस्टबिन तथा कुछ अखबारी कागज अवश्य रखना चाहिये। इस्तेमाल किया हुआ नैपकिन पुराने अखबारी कागज में लपेटकर डस्टबिन में डाल देना चाहिये।

2. इंसिनरेटर अथवा दाहक (incinerator):—

घर में पुराना 180 लीटर वाला ड्रम इंसिनरेटर के रूप में इस्तेमाल किया जा सकता है। जिसके ऊपर का ढक्कन काटकर अलग दिया जाता है, तथा नीचे लगभग 10 इंच दूरी पर इसकी बाड़ी में छेद करके सरिये के टुकड़े डाल दिये जाते हैं। लकड़ी अथवा कागज डालने हेतु एक छेद



बनाया जाता है। इस ड्रम में ऊपर का ढक्कन खोलकर नैपकिन्स को डालते रहते हैं, तथा समय-समय पर नीचे से कागज तथा लकड़ी डालकर जला देते हैं। ऊपर ढक्कन में धुआँ निकलने हेतु एक टिन का पाइप लगा देते हैं, जिससे गन्दा धुआँ ऊपर आसानी से बाहर चला जाये। यदि धुआँ वाला पाइप न हो तो भी ड्रम का आकार बड़ा होने के कारण धुआँ आसानी से बाहर चला जाता है।



180 ली. के ड्रम से बनाया गया दाहक (Incinerator)

3. सैनिटरी पिट:—

यदि घर के आस-पास ज्यादा खुली जगह उपलब्ध हो त इस्तेमाल किये गये नैपकिन्स को अखबारी कागज में लपेटकर डाल देना चाहिए तथा ऊपर से मिट्टी से अच्छी प्रकार से दबा देना चाहिये, ताकि पशु आदि इसे खोदकर ना निकाल सकें।

4. सार्वजनिक स्थल / स्कूल में नैपकिन का निस्तारण:—

सामान्यतया सार्वजनिक शौचालयों के आस-पास महिलाओं द्वारा फेंके गये नैपकिन्स यदा कदा दिखाई देते हैं, यह ठीक स्थिति नहीं है। नैपकिन्स को पुराने अखबारी कागज में लपेटकर शौचालय अथवा विद्यालय परिसर में रखे गये डस्टबिन में डालना चाहिये।

5. इंसिनेरेटर अथवा दाहक (incinerator) का प्रयोग:—

वर्तमान में आधुनिक कम कीमत वाले दाहकों का निर्माण हो चुका है। जिसका प्रयोग नैपकिन्स के निस्तारण हेतु सार्वजनिक शौचालयों में किया जा सकता है। यह सुरक्षित तथा Cost Effective होते हैं।

ये दाहक विभिन्न प्रकार के कचरे जैसे कि गन्दे कपड़े, रूई के कचरे, सैनिटरी नैपकिन्स, कागजी के रूमाल (Paper Towels) आदि को जला कर राख कर देते हैं। ये कचरे राख में बदल जाते हैं, तथा अन्य गैसों हवा में निकल जाती हैं। ये दाहक उपयोगकर्ता के अनुरूप होते हैं, तथा मानव चालित (Manually Operated) होते हैं।

दाहक में दो कक्ष (Chambers) होते हैं। पहला नीचे वाला कक्ष, जो कि दहन को नियंत्रित करता है। इसमें जलाने तथा राख को निकालने के लिये एक छोटा सा दरवाजा होता है। दूसरा चैम्बर, जिसमें कि कचरा रहता है। इसी चैम्बर में कचरा जलता है। इसमें एक पाइप लगा होता है, जिसका मुँह टायलेट में खुला रहता है। इसी में कचरे को डालते हैं। पाइप इस प्रकार फिट रहता है कि इसके मुँह में कचरा डालते ही सरक कर चैम्बर में वायर गेज पर पहुँच जाता है। इन्हें साप्ताहिक रूप से जलाया जाता है। इसी चैम्बर में ऊपर की ओर एक पाइप लगा होता है, जिससे कचरा जलते समय उत्पन्न गैसीय पदार्थ हवा में निकल जाते हैं। ये दाहक छात्राओं तथा अध्यापिकाओं द्वारा प्रयोग किये जा सकते हैं। इनके प्रयोग से छात्रायें बिना किसी शर्म अथवा झिझक के स्कूल जा सकती हैं।



उपयोगिता को देखते हुए इनकी कीमत बहुत अधिक नहीं होती है। सस्ती दर वाले दाहक उपलब्ध हैं। लोहे की बाड़ी वाले अथवा कन्क्रीट की बाड़ी वाले दोनों प्रकार के दाहक उपलब्ध हैं, जिन्हें सुविधानुसार विद्यालयों / सार्वजनिक शौचालयों में लगाया जा सकता है।

दाहक उपलब्धता हेतु वेबसाइट : www.sanitarynapkinincinerator.com |

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“स्वजल” पंचायती राज व्यवस्था की आदर्श परिकल्पना

पंचायती राज की व्यवस्था को स्वजल परियोजना ने आत्मसात किया है।
अपना गांव, अपना राज्य, अपना देश की परिकल्पना को साकार किया है।।

सामुदायिक सहभागिता से सब काम हैं होते, मिल जुल कर सब बातें करते।
पेयजल एवं स्वच्छता की जानकारी का, सबको पाठ पढ़ाया है।।

ग्राम पंचायतों में गठित समितियाँ, खुद अपना ही काम हैं करती।
दीवार लेखन, नुक्कड़ नाटक, चलचित्रों ने कार्यक्रम को पारदर्शी बनाया है।।

साफ—सफाई, शौचालय निर्माण के प्रति लोगों को तैयार कराया है।
निर्मल भारत अभियान कार्यक्रम ने भारत माता का शीष उठाया है।।

ग्रामीण जन परियोजना से लाभ उठाते, पानी की जाँच भी खुद ही करते।
ग्राम प्रधान, आशा, आँगनवाड़ी, बुद्धिजनों को यह सब रास आया है।।

आओ सब अब कसम हैं खाते, पर्यावरण अपना शुद्ध बनाते।
देखो सब भाई और बहनों, स्वजल ने गाँव को निर्मल बनाया है।।



दीप चन्द्र पुनेठा

परियोजना प्रबंधक

डी.पी.एम.यू.,—पिथौरागढ़



अब वो दिन बीत गए

स्वच्छ जल हो स्वच्छ वायु
स्वच्छ ही विचार हो,

स्वजल जीवन स्वच्छ आत्मा
स्वच्छ ही विचार हो,

देश का गौरव बढ़े
आपका सम्मान हो,

एक या दो ही हो प्यारे बच्चे
खुशियों की भरमार हो,
देश का गौरव बढ़े
आपका सम्मान हो,

खुशहाली में घर-घर झूमे
हर परिवार में शौचालय हो,
स्वच्छ जल हो, स्वच्छ वायु
स्वच्छ ही विचार हो,

शशी शर्मा

आंगनवाड़ी कार्यकर्त्री
आंगनवाड़ी केन्द्र-उपरोली, विकासखण्ड-कालसी
जनपद-देहरादून



सफलता की कहानी

ग्राम पंचायत—कांडा खालसा, सितोनस्यूं, कोट पौड़ी गढ़वाल, उत्तराखण्ड

विकासखण्ड कोट के अन्तर्गत ग्राम कांडाखालसा में वर्तमान में लगभग 250 लोग निवास करते हैं। यह ग्राम मण्डल मुख्यालय पौड़ी से सड़क मार्ग से लगभग 12 की.मी. की दूरी पर बसा है। 2003—2004 में इस गाँव में सम्पूर्ण स्वच्छता कार्यक्रम चलाया गया, तब यहाँ अधिकतर घरों के पास शौचालय की सुविधा नहीं थी। ग्रामवासी शौच के लिये जंगल जाते थे, इसका मुख्य कारण गाँव में पानी का अभाव था। उसी दौरान



“परिवर्तन ग्रामीण समाज सेवी संस्था” का जिला परियोजना प्रबन्धन इकाई, श्रीनगर गढ़वाल के साथ इस कार्यक्रम में जुड़ना, ग्राम परिवर्तन का एक महत्वपूर्ण कारण बना। ग्राम के लोगों की प्रमुख समस्या पेयजल की सुविधा का न होना था, और गाँव का मैला होना भी इसी से जोड़कर देखा जा सकता था। स्वजल एवं सहयोगी संस्था के आपसी सहयोग से किये गये प्रयासों एवं ग्रामवासियों से लगातार सम्पर्क में होने के कारण इस ग्राम पंचायत को सम्पूर्ण स्वच्छता के अन्तर्गत वर्ष 2007 में निर्मल ग्राम पुरस्कार हेतु चयनित किया गया और सौभाग्य से ग्राम कांडाखालसा को इस वर्ष निर्मल ग्राम पुरस्कार मिला। फिर भी ग्राम की मुख्य समस्या पेयजल की उपलब्धता थी।

वर्ष 2008—2009 में ग्रामवासियों के साथ स्वजल एवं सहयोगी संस्था के निरन्तर सम्पर्क के कारण कांडाखालसा को स्वैप के अन्तर्गत स्वजल बैच—1 ‘बी’ में पेयजल योजना निर्माण हेतु चयनित किया गया। ग्राम से लगभग 1650 मीटर दूरी से इस ग्राम के लिये गुरुत्व की पेयजल योजना प्रस्तावित की गई थी, योजना निर्माण हेतु पेयजल स्रोत कुण्डरू गधेरा भी इसी गाँव की अपनी सीमा में उपलब्ध था।



योजना की जानकारी प्राप्त

ग्रामवासियों, परिवर्तन ग्रामीण समाज सेवी संस्था के सहयोग एवं जिला परियोजना प्रबन्धन इकाई, श्रीनगर गढ़वाल के मार्ग—निर्देशन से पेयजल एवं स्वच्छता उपसमिति कांडाखालसा का गठन किया गया।

समुदाय को मानसिक तौर पर पेयजल योजना के निर्माण / संचालन के लिए तैयार करने हेतु जागरूकता बैठकों का दौर चला और लग गये कार्य में। 1650 मी. की गुरुत्व सप्लाई लाईन के द्वारा ग्राम में आज पर्याप्त पेयजल उपलब्ध हो रहा है। इससे ग्राम की पेयजल की पूर्ति ही नहीं हो रही है बल्कि ग्राम के लोग मौसमी सब्जी एवं फलों का भी उत्पादन कर रहे हैं। ग्राम को मुख्य मोटर मार्ग से जोड़ा जा चुका है।

वर्तमान में ग्राम पंचायत कांडाखालसा एक मॉडल ग्राम के रूप में विकसित हो रहा है, समिति द्वारा नियमित समय पर बैठकें आयोजित की जा रही हैं। पेयजल योजना को सुचारू-रूप से संचालित करने हेतु समिति द्वारा प्रतिपरिवार प्रतिवर्ष ₹180 रखरखाव खाते में जमा किये जा रहे हैं।



वर्तमान में ग्राम के निवासी अपने विकास में निरंतर प्रगतिशील हैं। पर्यावरण के दृष्टिकोण से भी ग्राम स्वच्छ पर्यावरण संबर्द्धन की ओर बढ़ रहा है। ग्राम वासियों के द्वारा चौड़ी पत्ती वाले वृक्षों, जंगली पौधों एवं फलदार वृक्षों का निरंतर विस्तार किया जा रहा है। स्वजल द्वारा किये गये प्रयासों व ग्रामवासियों की इच्छाशक्ति से वास्तविक तौर पर कांडाखालसा एक हरा भरा ग्राम बन गया है।

अनिल कुमार ढौंडियाल

सामुदायिक विकास विशेषज्ञ
डी.पी.एम.यू.,-पौड़ी (गढ़वाल)



“स्वजल स्वच्छता गौरव पुरस्कार”

(बसावट/तोक स्तर पर पेयजल एवं स्वच्छता सुविधाओं के दीर्घकालिक स्थायित्व हेतु संचालन एवं रख-रखाव तथा खुले में शौच की प्रथा को समाप्त करने के लिए “बसावट स्तरीय पुरस्कार”)

उत्तराखण्ड ग्रामीण पेयजल एवं स्वच्छता परियोजना के अन्तर्गत पेयजल एवं स्वच्छता सुविधाओं के दीर्घकालिक स्थायित्व की सत्ता बनाये रखने की दृष्टि से ऐसी उपभोक्ता पेयजल एवं स्वच्छता उपसमितियों को बसावट स्तरीय पुरस्कार दिया जाना है, जिनके द्वारा तोक/ बसावट स्तर पर निर्मित की गयी परिसम्पत्तियों/ सुविधाओं का निरन्तर उपयोग प्रभावी ढंग से संचालन एवं रख-रखाव किया जा रहा है, जिसके लिए निम्न पात्रता/ मानक प्रस्तावित किये गये हैं।

1. **बसावट/तोक के चयन का आधार:**— ऐसी उपभोक्ता पेयजल एवं स्वच्छता उपसमितियाँ, जिनके द्वारा विगत 3 वर्षों से पेयजल एवं स्वच्छता परिसम्पत्तियों का संचालन एवं रख-रखाव किया जा रहा है।
2. **स्थायित्व आधारित:**— पेयजल एवं स्वच्छता सेवाओं के मूल्यांकन हेतु निम्नलिखित मानदण्ड अपनाये जायेंगे —

(i) पेयजल आपूर्ति सेवा:—

- पेयजल योजना पूर्ण रूप से कार्य कर रही हो तथा उच्च सेवा एवं गुणवत्ता के साथ प्रबन्धन का कार्य किया जा रहा है।
- योजना के आत्मार्पण के बाद उपभोक्ता पेयजल एवं स्वच्छता उपसमिति/ग्राम पंचायत संचालन एवं रख-रखाव का खर्च उपभोक्ता शुल्क से कर रही हो।
- गुरुत्व पेयजल योजनाओं में 30 प्रतिशत से अधिक तथा ट्यूबवेल पम्पिंग योजनाओं में 70 प्रतिशत परिवारों के पास पेयजल के निजी संयोजन हो।
- 80 प्रतिशत से अधिक उपभोक्ताओं के शुल्क की वसूली हो रही हो।
- ग्राम पंचायत/उपभोक्ता पेयजल एवं स्वच्छता उपसमिति द्वारा योजना के रखरखाव तथा उपभोक्ता शुल्क का रिकार्ड व्यवस्थित किया गया हो।

(ii) स्वच्छता सेवायें:—

- सभी परिवारों के पास व्यक्तिगत घरेलू शौचालय हो तथा उनके द्वारा उपयोग किया जा रहा हो। शौचालय जिस उद्देश्य से डिजाइन किया गया हो उसके अतिरिक्त अन्य उपयोग न हो।
- गाँव पूर्ण स्वच्छ हो तथा कहीं भी कूड़ा-कचरा न हो।
- गन्दे पानी की उचित निकासी हो।
- स्वच्छता अभियान एवं स्वस्थ घर सर्वेक्षण 06 माह में एक बार किया जाता हो तथा उसकी उपलब्धियां यह प्रदर्शित करती हों कि परिवारों द्वारा स्वच्छता की आदतें अपनायी जाने वाली किन्हीं दो आदतों को अभिलेखित किया गया हो।
- सार्वजनिक सुविधाओं जैसे स्कूल, आंगनवाड़ी केन्द्र, प्राथमिक स्वास्थ्य केन्द्र और सामुदायिक केन्द्र में शौचालय के साथ-साथ जलापूर्ति का भी प्राविधान किया गया हो तथा उनका उपयोग किया जा रहा हो।
- ग्राम पंचायत/उपभोक्ता पेयजल एवं स्वच्छता उपसमिति द्वारा निर्मित एवं उपयोग किये जा रहे शौचालयों के आंकड़ों का रिकार्ड हो।

(iii) संस्थागत मुद्दे:—

- सामुदायिक संस्थाएँ जैसे उपभोक्ता पेयजल एवं स्वच्छता उपसमिति द्वारा अपने मानकों के अनुसार नियमित बैठकें की जा रही हो।
- बैठक की कार्यवाही अभिलेखित की जा रही हो।
- समिति द्वारा बनायी गयी नियमावली ग्राम पंचायत द्वारा अनुमोदित की गयी हो।
- उपभोक्ताओं की शिकायतों का निस्तारण 02 दिन के अन्दर किया जाता हो।

(iv) लाभार्थी संतुष्टि:—

- ग्राम पंचायत का रिकार्ड यह प्रदर्शित कर रहा हो कि 90 प्रतिशत से अधिक परिवार पेयजल एवं स्वच्छता कार्यक्रमों से संतुष्ट हैं।
- सामाजिक अंकेक्षण समिति द्वारा योजना को अनुमोदित किया गया हो।

3. **बसावट/तोक हेतु पुरस्कार राशि:—** पुरस्कार राशि केवल उपभोक्ता पेयजल एवं स्वच्छता उपसमिति को दी जायेगी, जबकि गैर सरकारी संगठन एवं अन्य कर्मियों को उनके प्रयासों के लिए प्रशस्ति पत्र एवं प्रतीक चिन्ह दिये जायेंगे। बसावट स्तर पर दी जाने वाली पुरस्कार राशि जनसंख्या के आधार पर निम्नवत विवरण के अनुसार है:—



आधार / धनराशि	बसावट / तोक			
डी0पी0आर0 के अनुसार डिजायन जनसंख्या	100 से कम अथवा उसके समकक्ष	101 से 200	201 से 400	401 से अधिक
पुरस्कार धनराशि (₹)	20,000.00	30,000.00	40,000.00	50,000.00

4. बसावट / तोक के चयन का आधार:-

- जिला जल एवं स्वच्छता मिशन द्वारा उपभोक्ता पेयजल एवं स्वच्छता उपसमितियों से आवेदन मंगायेगी तथा पुरस्कार पात्रता का हिन्दी अखबार अथवा अन्य मीडिया के माध्यम से वृहद् प्रचार-प्रसार हेतु विज्ञापित करेगी।
 - उपभोक्ता पेयजल एवं स्वच्छता उपसमिति के अध्यक्ष द्वारा नामांकन प्रपत्र भरकर समीक्षा हेतु जिला परियोजना प्रबन्धन इकाई को प्रेषित करेंगी।
 - सभी नामांकन प्रपत्रों की जनपद स्तर पर द्वितीयक आंकड़ों हेतु छँटनी की जायेगी।
 - जिला जल एवं स्वच्छता मिशन / जिला परियोजना प्रबन्धन इकाई पात्र आवेदनों को परियोजना प्रबन्धन इकाई, को अग्रसारित करेंगी।
 - परियोजना प्रबन्धन इकाई / जिला जल एवं स्वच्छता मिशन द्वारा गाइड लाइन विकसित करते हुए सर्वेक्षण पद्धति तय की जायेगी।
 - अन्तर जिला सर्वेक्षण दल द्वारा स्थलीय भौतिक सत्यापन किया जायेगा।
 - प्रत्येक सर्वेक्षण दल के सदस्यों को प्रमुख सचिव, पेयजल उत्तराखण्ड शासन द्वारा नामित किया जायेगा।
 - भौतिक सत्यापन के पूर्व सर्वेक्षण दल का एक दिवसीय अभिमुखीकरण किया जायेगा।
 - जनपदों द्वारा अन्तिमीकृत की गयी संस्तुतियों को बसावट / तोक स्तरीय पुरस्कार हेतु राज्य स्तरीय चयन समिति के सम्मुख प्रस्तुत किया जायेगा।
- राज्य स्तरीय चयन समिति में सदस्य निम्नवत होंगे:-
 - प्रमुख सचिव, पेयजल उत्तराखण्ड शासन
 - निदेशक, स्वजल परियोजना
 - प्रबन्ध निदेशक, उत्तराखण्ड पेयजल निगम
 - मुख्य महाप्रबन्धक, उत्तराखण्ड जल संस्थान
 - वित्त नियंत्रक, राज्य जल एवं स्वच्छता मिशन
 - राज्य समन्वयक, एन0बी0ए0 / डब्ल्यू0एस0एस0ओ0

- बसावट / तोक के लिए पुरस्कार धनराशि के भुगतान की प्रक्रिया:- राज्य स्तरीय चयन समिति के द्वारा बसावट / तोक चयन होने के पश्चात राज्य स्तर पर विजेता बसावटों / तोकों हेतु राज्य स्तर पर पुरस्कार वितरण समारोह आयोजित कर पुरस्कार धनराशि के बैंक ड्राफ्ट वितरित किये जायेंगे।



बसावट स्तरीय पुरस्कार के लिए आवेदन प्रपत्र

- उपभोक्ता पेयजल एवं स्वच्छता उपसमिति :
आवेदक का नाम :
- बसावट/तोक का नाम :
- बसावट/तोक में परिवारों की संख्या :
- डी0पी0आर0 के अनुसार बसावट/तोक की डिजाइन जनसंख्या :
- ग्राम पंचायत का नाम :
- विकासखण्ड का नाम :
- जनपद का नाम :
- उपभोक्ता पेयजल एवं स्वच्छता उपसमिति के अध्यक्ष का नाम.....
- उपभोक्ता पेयजल एवं स्वच्छता उपसमिति के अध्यक्ष का पता.....
- दूरभाष नं०.....
- कृपया निम्नवत बिन्दुओं पर सूचना भरें :
 - पेयजल योजना पूर्ण होने की तिथि :—
 - आत्मार्पण की तिथि :

12.1 विगत तीन वर्षों का आय एवं व्यय विवरण:—

क्र०सं०	वर्ष	उपभोक्ता शुल्क से आय	व्यय	बचत/घाटा
1	2012-13			
2	2011-12			
3	2010-11			

12.2 विगत वर्ष का मांग और संग्रह का विवरण:—

क्र०सं०	वर्ष	वर्तमान मांग एवं पिछला अवशेष	संग्रह	संग्रह क्षमता (प्रतिशत में)
1	2012-13			
2	2011-12			
3	2010-11			

13. स्वच्छता का स्तर:—

- कुल परिवारों की संख्या :—
- कुल परिवारों की संख्या जिनके पास व्यक्तिगत घरेलू शौचालय हैं :—
- सार्वजनिक सुविधाओं की संख्या :—
- कुल सार्वजनिक सुविधाओं की संख्या जिनमें शौचालय हैं :—

बीरेन्द्र भट्ट

सामुदायिक विकास विशेषज्ञ
पी.एम.यू.,— देहरादून



"संदेश"

स्वजल परियोजना द्वारा जनपद में संचालित किये जा रहे निर्मल भारत अभियान, राष्ट्रीय ग्रामीण पेयजल कार्यक्रम एवं पेयजल गुणवत्ता अनुश्रवण एवं निगरानी कार्यक्रमों से ग्रामीण जनता को सीधा लाभ मिल रहा है। स्वजल द्वारा संचालित कार्यक्रमों से जहाँ ग्रामवासी सीधे ग्राम पंचायत के विकास कार्यों से जुड़ रहे हैं वहीं ग्रामवासी व्यक्तिगत/सामाजिक/पर्यावरणीय स्वच्छता के प्रति भी जागरूक हो रहे हैं। स्वजल परियोजना को जन्मदीय इकाई द्वारा सूचना, शिक्षा, सम्प्रेक्षण से कार्यक्रमों का व्यापक प्रचार-प्रसार किया जा रहा है।

विभिन्न जनप्रतिनिधियों, अधिकारियों एवं सामाजिक कार्यों से जुड़े लोगों द्वारा भी इस कार्यक्रम में सहयोग दिया जा रहा है। "स्वजल समाचार पत्रिका" भी इन कार्यक्रमों को जन-जन तक पहुंचाने में महत्वपूर्ण योगदान दे रही है। मैं जहाँ स्वजल समाचार पत्रिका की इस कार्य के लिए प्रशंसा करता हूँ वहीं इन पुनीत कार्यों से जुड़े आमजनों के प्रति भी आभार व्यक्त करता हूँ।



(डा० आनन्द श्रीवास्तव)
मुख्य विकास अधिकारी
जनपद-पिथौरागढ़

राष्ट्रीय स्वच्छता जागरूकता अभियान (झलकियाँ)





निःशुल्क वितरण हेतु

स्वजल



समाचार

स्वच्छ भारत मिशन (ग्रामीण)

स्वच्छ रहें स्वस्थ रहें,

