

Project Management Unit

The Swajal Project



SUCCESS STORIES

UTTARANCHAL RURAL WATER SUPPLY & ENVIRONMENTAL SANITATION PROJECT
(Department of Drinking Water, Government of Uttarakhand)
Mussoorie Diversion Road, Makkawala, Dehradun

Community Participation; An initiative for development **- Clean Village Devtoly**

Village Devtoly, Block Bageshwar, district Bageshwar is situated 38 Km away from the district headquarter. This Gram Panchayat has total 49 households, out of these 08 households are Below Poverty Line (BPL). In this area there are total three education centers, which include – Inter College, Primary school/ Anganwadi and *Sanskrit Maha Vidyalaya*.

In December 2003 the implementation of Total Sanitation Campaign (TSC) was started in the Gram Panchayat by organizing a conference chaired by the Gram Pardhan, Shri Puran Chandra Pathak. There were only 45% households covered by sanitation in the Gram Panchayat before Total Sanitation Campaign was begun. Out of these households, some had



made temporary latrines, but due to their old habit, family members including, old men, children and women still used to defecate in open. Animal dung and other solid/liquid waste was dumped openly thus creating unsanitary environment in the dwelling premises, roads and pathways. The toilet existing in the primary school was also damaged and useless.



After collecting the details about Total Sanitation Program from the District Project Management Unit (DPMU), the Gram Pradhan called a general meeting of the panchayat. In this meeting the villagers were made aware of the long term benefits from Total Sanitation Campaign. The villagers gave their consent and pledged to abide

by the principles of Total Sanitation Campaign thereby making their Gram Panchayat “Nirmal” In this meeting it was decided that no one in the village would defecate in open and would not pollute water sources. Along with this they also decided to keep environment clean and safe. For this purpose, Ward Members and Women were accorded responsibilities. The responsibility of keeping their wards clean was distributed among all Ward Members by the Gram Pradhan.

Cleanliness Campaigns were conducted by the women groups of the village from time to time. Toilet pans and pipes were made available to some BPL/APL beneficiaries by the Support

Organisation “Paryavaran Vikas Samiti”. Technical knowledge about low cost toilet construction was provided to the community by the project portfolio managers. Sanitation Campaign had great effect on those households who were totally unaware about hygiene practices like safe disposal of garbage waste water etc. School rallies were organized and efforts were made to discourage use of polythene bags, create awareness about environmental sanitation and to use sanitary latrines.

The Gram Pradhan himself took initiative and motivated the community about personal hygiene. Along with this he also involved women, children and youngsters to be a part of the sanitation campaign. The funds received for development works were utilized properly and the damaged drainage system in the village was repaired. Self Help Groups were also formed with the help of active participation by the retired Army personnel.

By their own efforts community proved that “Where there is a will, there is a way”. Under Total Sanitation Campaign individual household latrines were constructed by all BPL and APL households in the village. In primary school two toilets were constructed for girls and boys separately and proper arrangements for water



availability was ensured. Presently all the households in the village have their own toilet facilities and they are also regularly using them. The efforts made by Shri Puran Chandra Pathak, Gram Pradhan, Ward Members, Women groups, Children Groups and the Support Organization to achieve environmental cleanliness in the Gram Panchayat are highly appreciable. The Gram Panchayat Devtoly, Block Bageshwar, District Bageshwar has been awarded Nirmal Gram Puraskar by His Excellency President of India on 23rd March 2006. The Gram Pradhan Sri Puran Chandra Pathak received a cheque of Rs. 2 lakh and a certificate of excellence for their efforts in the village.

Scaling up with Swajal

A Team of young enthusiastic journalists visited Swajal Project-I in October 2002 and showed eagerness to inspect and assess the impact of community based rural water supply projects. They were taken round the Swajal villages implemented by a NGO - HIHT. The article on the field visit to Swajal villages was published in the issue of **October 27, 2002** in the **Deccan Herald Sunday Spotlight by Lakshime Salgaune**. It's extract is reproduced below:

In the tiny hamlet of Bandawali, Munni Devi's day has just begun. As the tender sun peeps from behind the hills that surround her home, she has just returned from fetching her first pot of water for the day. Three kms behind the hill in her backyard is located a small stream which suffices for her water need. "This is just beginning, I have to go back at least seven times," she says.

By 10 in the morning, she has finally completed the ordeal for the day – all the water drums are full. But her day is far from over. She has to immediately go in search of fodder for cattle, firewood for the kitchen. Two other women join her. The three of them have an arduous hours trek to reach the forest folds. 30 years old Munni Devi has been hospitalised twice. Doctors says the only cure is rest "Who will run my house if I lie down ? she asks. Munni Devi is not alone. Most women in Garhwal and Kumaon ranges in Garhwal and Kumaon are inhospitable Ironically, though these places are known for their icy streams, today safe drinking water become a rare commodity. For the women who take responsibility of the household (as most men are employed away from home in the plains and return only for short duration), each day revolves round the business of fetching water. It is the hardest part of the day.

Keeping this pitiable plight in the mind, it so seems that somebody has finally noticed. And for the women in these hill regions, there seems enough reason for hope. For across the rugged landscape of Garhwal and Kumaon, in the tiny hill tucked state of Uttaranchal, a massive project is underway which hopes to bring water to the doorstep of every home in the hills. Swajal the World Bank assisted Uttaranchal (UA) Rural Water Supply and Environmental Sanitation Project in coordination with NGO's and village communities is the first community driven water supply and sanitation programme that is being successfully implemented in the villages of Uttaranchal aimed to ensure community ownership for the facility provided, keeping in mind long term sustainability of the programme. The Swajal project also aim at testing and validating an alternative service delivery mechanism thereby emphasizing on a demand responsive approach.

With the help of NGO's the project has been able to successfully strength rural community to plan, implement and maintain their water supply and sanitation scheme. Swajal was conceived on the premises that the UP Jail Nigam, which was in charge to set up rural water supply system, was ineffective on ground.

The project is transparent and thrusts maximum power in the hands of the community, where in villagers for the first time are made aware, that the facilities provided are their own and its maintenance is essentially their concern, as against expecting somebody from the government to maintain the infrastructure. It has a three- fold structure, which thrives on interdependence. "When the village water and sanitation committee (VWSC) was formed in our village everybody was skeptical. But slowly with the help of staff of Himalayan Institute Hospital Trust, we have been able to implement Swajal. We never thought we were capable of bringing water to our doorstep "says Chandrakala whose home is locate at the high end of Kainsur almost touching the clouds. VWSC's are the grassroots structures for the effective implementation of Swajal. They plan implement and ultimately manage the water and sanitation scheme. The VWSC which consists of 7 to 12 members, is democratically elected and representatives with a minimum of 20 % representation from the socially and economically backward section of the community and at least 30 % women members. The formation of VWSC's is mobilized by the supporting NGO's. Swajal's innovation also lies in identifying non-government organization as coherent partners in the process of social change. For the first time in the country a project has had three-figure heads- the government, a funding agency and the parallel change seekers. The NGO's work as a team in absolute synchrony to be led by the beneficiaries' themselves- the rural community. The Project Management Unit (a registered society consisting of people from both private and public sector formed to monitor the implementation of the project at the state level) is given the task of identifying NGO's to sub contract areas for the implementation of Swajal. The NGOs further assess the need and demand for the project thereby liaison at two ends (both with PMU and VWSC) working as catalyst for success.

The community either in cost, labour or kind ploughs 10% of the capital cost of the project. "Earlier, before Swajal through the government had given us pipeline, they were just destroyed. And as usual, though we lodged a complaint, nobody came and repaired it. But now we are so cautious simply because we have worked our soul out to fix it. Nobody dare touch the taps or the pipes" cautions Ram Lal, a resident of Bandawali where Swajal has now been implemented. At each level right from conception to the post implementation maintenance stage

a striking feature of the project is immense power being vested in the hand of the local community through its democratically formed VWSC. While the NGOs remain facilitator and catalyst, communities are empowered with the right to choose the kind of technology they'd like to use to bring home to their doorstep. "In our area we have a big river flowing in the valley. But most of homes are situated on steep hill slopes. So engineers from HIHT after feasibility study presented us with 3-4 options. With their help we discussed the cost and finally agreed to use the Gravity Scheme with which the operation and maintenance (O & M) cost were coming up to Rs. 15/ month/household" explains Usha, who is a member of the VWSC Kainsur.

Finally post implementation VWSC finalized on their individuals tariffs to suffice for maintenance need and thereby responsible for the effective functioning of the system.

At the village selection stage, there is a big incentive for communities to join the project since it is very difficult for them obtain any other source of financing for a water supply scheme. At the planning stage there is a strong incentive to choose the least cost technology, since they have to share in capital cost and also pay for its O & M. In the implementation phase the incentive to procure good quality materials and services for construction is strong because it is the community, which benefits most from a well-constructed and functional water supply scheme.

The gender sensitive structure of Swajal ensuring that women, whose lives it has benefited the most have decision-making power has been groundbreaking in approach. An integral part of Swajal is also the awareness campaigns intended by the VWSC wherein the supporting NGOs coordinate with health experts to discuss with the community dangers of water born illness, the need for hygiene and sanitation etc.

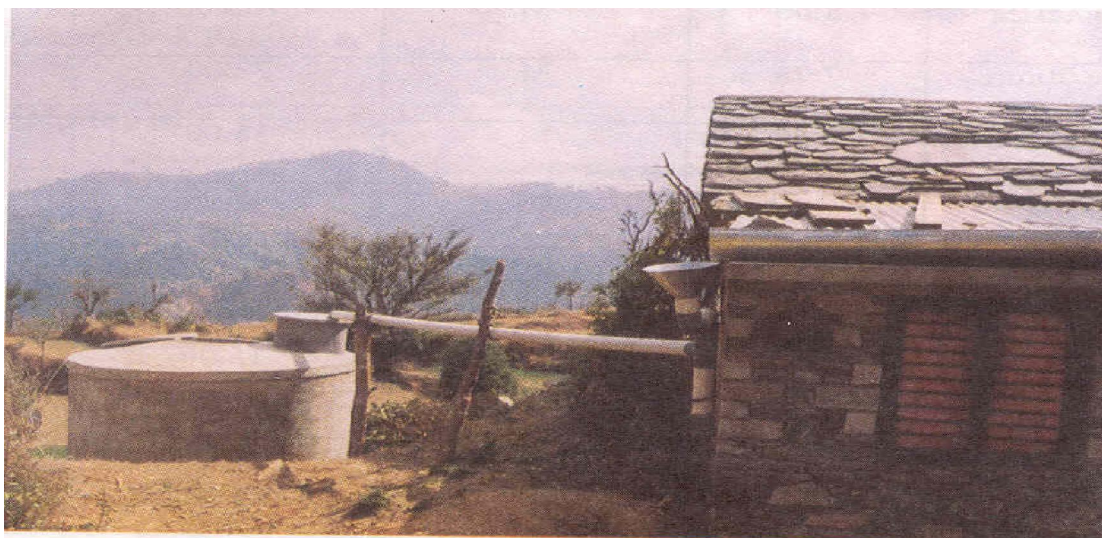
As Swajal is implemented across Uttaranchal with a significantly high success rate, other states are keen on replicating the success story. Most States are undertaking pilot projects to design a model for their State. As the government of Karnataka vows commitment to rural development, a leaf out of the Uttaranchal diary on Swajal would indeed help the water scarce district of our state as well.

Roof Top Rain Water Harvesting: Water Supply Technology for the Future

Water is an essential natural resource for sustaining life and environment. India has 300 mm more average rainfall than the world average of 800 mm though a large amount of it is allowed to run into the river and not properly harvested either to recharge the catchment area of hill sources or collected for proper utilization. The storage of rainwater in different ways has been an integral part of India's tradition, though of late, piped water supply schemes have adversely affected this traditional wisdom. Harvesting of rainwater is one of the effective ways to tackle water shortage in hills and also will help in controlling floods and soil erosion.

The technology used for Roof Top Rain Water Harvesting system consists of collecting the rainwater falling on the roof of individual houses by means of gutters provided at the lower ends of the roof. The collected rainwater is conveyed by pipes to filtration unit and then to storage containers. The water from these containers is abstracted by tap. The initial rainfall of about half hour is diverted through the bypass system, which may be contaminated by dust, bird dropping, leaves, twigs, insects etc.

Disinfection of the collected water is provided by means of bleaching powder/chlorine tablets.



Rain Water Harvesting Using Slaty Roof

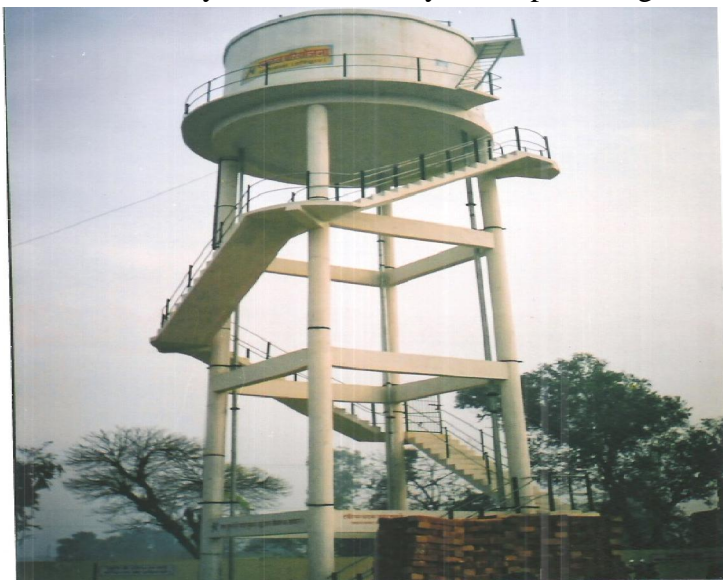
Based on the area of the catchment available from the roofs, the average annual rainfall of the region, the run off coefficient of the roof material- Slate, RCC, CGI etc. the water storage capacity is calculated for the dry period. The storage reservoir could be of Ferro-cement, RCC, GI steel, synthetic polymer etc. Owing to cost effectiveness, lesser area requirement and ease of construction and maintenance, ferrocement tanks have been preferred in Swajal.

The average cost of an individual rainwater-harvesting unit using GI gutters, ferrocement tank of 7 kl. capacity comes around Rupees Twenty Thousand. The operation and maintenance mainly comprises the cleaning of roof for leaves, twigs etc. before rain and diversion of initial rain through bypass system. In Swajal, a total of 1158 individual Roof Top Rain Water Harvesting units have been constructed in 69 villages.

All attempts should be made to harvest rainwater as rain is the only source of water, which does not carries a price tag at the point of delivery.

Swajal Drinking Water Scheme – Dhariwal : An example of resolving Drinking Water problem by community effort

Gram Panchayat Dhariwal, Block – Bahadrabad, Laksar, is situated in Haridwar district. In spite of its proximity to the road head the village was facing crises of adequate availability of drinking water. There were some hand pumps installed in the village for drinking water, but these used to dry-up during the summers. Most of the villagers had installed shallow hand pumps, which supplied contaminated water. As a result, occurrence of water borne diseases was quite common in the village. When the villagers learnt about the Sector Reform Project, then the Gram Panchayat submitted its proposal to SWAJAL District Project Management Unit (DPMU) – Haridwar for the construction of water supply scheme in their village. The Gram Panchayat - Dhariwal was selected for the construction of scheme



in the year 2002. The construction work of the scheme was started after the community agreed to follow the basic principles of Sector Reform Project such as payment of community contribution against capital cost, participation in planning, implementation and 100% operation and maintenance by the community. For providing assistance to the user drinking water and

sanitation committee, a village technical committee was formed. By the efforts of the community the scheme was completed in the year 2004 in which about Rs. 17.53 lakh were spent against DPR cost of Rs. 20.64 lakh. Thus there was substantial saving in cost of construction.

At present the scheme is being maintained by the user's committee and currently 275 households are

being provided water supply connection. The committee is collecting Rs. 25 per month per household as water charges for maintenance. For new connection, the concerned household has to pay Rs. 2100 as connection charges. Timely collection of these charges has enabled continuous increase in the committee's maintenance fund. After paying all recurring expenses, at present the committee has deposited about Rs. 60,000 in its bank account.

The people are happy with the good quality of water which has reduced water borne disease. The scheme is providing sufficient quantity of water and has led to save their time which used to be spent in fetching water, it has also reduced physical burden of the family members specially that of women members. Today all villagers are satisfied with the working of the User Water and Sanitation Committee and are providing their co-operation to the committee whenever required.

Swajal: Multi-dimensional Impact on Village Life through Community Participation

Panergaon, is located on Ranikhet- Kausani road, in the Bagwalipokhar area, of Almora, Uttaranchal. The Panergaon is a small village inhabited by 300 persons. The agricultural land in the village is very fertile but is rainfed. The annual agricultural yield is directly proportional to the annual precipitation in the area. Agriculture is the main profession of the villagers; where as a few of them are augmenting their livelihood by working as priests.

Traditional water harvesting structures were the main source of water supply in the village before the year 1975. These traditional water harvesting structures are locally known by the term " Naula". These Naulas were not centrally located in the village but were on the western part of it. During summers availability of water in these sources usually got diminished and only remaining available source for domestic consumption for the villagers used to be Dhari Gadhera' (Small rivulet/stream). The village Panergaon was undertaken for project activities by the District Project Management Unit- Almora in the year 1995-1996. The difficulty of water supply scenario in the village was studied and possible way out was proposed.

Since the Dhari Gadhera was an appropriate source of water, it was technically and economically feasible to develop it as a water source for the proposed water supply scheme. This source was under such a tremendous pressure to full fill domestic water needs that, water crisis was felt invariably during summers. This surface water source was utilized for lifting water for pumping water supply scheme of the village. With a view to water conservation and recharge of the under ground water, small pits have been dug in the Dhari Gadhera catchment to conserve water in it. The accumulated water in these pits is also used by animals. Before construction of the water supply scheme a hand pump was installed by the project authorities, to win the confidence of the village community. Twenty feet deep infiltration well was first made and a pump house was erected with two electric motor of 1.25 HP installed in it. A clear water reservoir (CWR) of pressed steel on the highest elevation in the village was also erected. The capacity of the CWR is 11 KL. This way the villager's dream of possessing a water supply scheme of their own was fulfilled and the water supply scheme was commissioned on 1st January 1999. The scheme is looked after by the Village Water and Sanitation Committee (VWSC) of Panergaon. The scheme continues to provide enough water to the community.

At present there are 44 households in the village, each of them having its own household sanitary latrine. The waste water generated from the houses is disposed of through soak pit made for this purpose. The VWSC Panergaon undertakes Healthy Home Survey in the village and rewards the healthiest household so that others are also motivated to keep their own houses healthy and maintain hygienic conditions in their surroundings. Healthy baby competitions are organized frequently. Similarly Clean child competition is also organised in which cleanest child is awarded. The VWSC regularly hold monthly meetings in which the water supply issues are discussed and VWSC shares the income expenditure statement with the community. The VWSC is striving for best services relating to water and sanitation so that health and hygiene benefits are ensured.

The Swajal Project-I has added new dimensions and perspectives to the development of the village. The time saved in fetching water is being used for other productive works helping community to improve their financial status. Every household is maintaining a kitchen garden and producing green vegetables for their own consumption. This is resulting in considerable savings in earlier expenditure on green vegetables. The cattles are also getting safe water for

drinking and this has resulted in higher milk yields and low incidence of animal diseases. This is also transforming into health benefits for the children. The views on ways of living have totally changed in the village.

Construction of Household sanitary latrines during the project period has helped to keep down the various ill effects of open defecation, suffered earlier by the village community. The village was rewarded for 100% Household sanitary latrine coverage by the project authorities. The expenditure incurred on treatment of ailments resulting from use of poor quality water has drastically lowered and benefits in terms of financial savings are conspicuous. This impels us to say that Swajal approach is an important aspect for development of any village.

The Swajal Project-I interventions have also assisted to improve the literacy rate of the village. The women are devoting their more time in looking after the children and are more concerned towards the education of their wards. Their understanding of responsibility as a guardian has enhanced and they are sensitive towards the kind of school their children are attending. They help their children in completing the homework given by the school. The children earlier used to assist their mother to fetch water. Now they no longer do so. This has provided them an opportunity to utilise their time in studies and play. This is how, the Swajal Project has multidimensional impact on village life and has improved the living conditions of the people in these areas.

Village New Subhash Nagar, District Haridwar has set an example for community driven water supply scheme

Government of India supported Sector Reform Project was implemented in district Haridwar of Uttaranchal State. Village Subhash Nagar was one of the Gram Panchayat out of the 91 Gram Panchayats taken for Batch-I of the project. This village with 450 household has a total population of more than 4500 people. Though one old water supply scheme already existed in the village yet it could not supply enough water to all the households because of sudden rise in migrant population in the village. In the beginning it was difficult for the villagers to accept that they will have to pay 10% capital cost contribution for the scheme. However when repeatedly convinced by the District Project Management Unit and as well as by the district administration,

the village people agreed to pay the desired contribution for the scheme. Thus, a pumping scheme with Over Head Tank were designed costing Rs. 56.57 lakhs the village community formed their own User Water & Sanitation Committee (UWSC) and total Rs. 6.43 lakhs were collected for



capital cost contribution and for initial operation & maintenance cost of the water supply

scheme. The scheme is big one with total 22 km pipeline and over head tank with a pump house near which one conference room and a rest room have also been constructed by the committee.



The construction work of the scheme was supervised by the members of the UWSC

as well as by the villagers and the work was completed in time. The scheme has covered nearly

1200 consumers who are paying Rs. 30 as monthly water charges. Now, the UWSC is providing new connections only after payment of Rs. 1550 as connection charges. Water supply scheme is providing chlorinated water and one local person has been employed for looking after the water supply scheme. The committee is paying electricity charges and salary of the operator regularly. To ensure sustainability of the water supply scheme, the UWSC is saving approximately Rs. 1 lakh per annum in their account as fixed deposit. Besides successfully operating & maintaining water supply scheme some other works like construction and maintenance of drainage lines for waste water, repair of roads etc. is also being done by the UWSC after obtaining assistance from various sources like Vidhayak Nidhi, Zila Panchayat, Zila Yojna etc.

The User Water & Sanitation Committee of village Subhash Nagar is also looking into sanitation aspects of the village and they are creating awareness for construction of toilets. Most of the households already have their household latrines and the owners of the new houses in the village are being requested for invariably constructing a latrine in their house.

The instance of this water supply scheme has taught the villagers that public utilities can be successfully managed by their own institutions and thus it has changed the mindset of the people making them to realize that for better facilities collective management and ownership of community assets is necessary.

Nirmal Gram Basunga : Singular effort of Gram Pradhan

The Gram Panchayat (GP) Basunga of block Bhatwari, District Uttarkashi was taken up under the **Total Sanitation Campaign (TSC)** in the year 2005-06. The GP consists of 79 households including 68 Nos. of General category and 11 households of Scheduled Tribes with only 48 households having Household Sanitary Latrines (HSL).

The implementing agency of the Total Sanitation Campaign in district Uttarkashi, the District Project Management Unit (DPMU) – Uttarkashi, organized an orientation workshop at the Block level for disseminating information, education and communication activities to sensitize the Gram Pradhans towards sanitation. **Shri Pratap Singh Bisht, Gram Pradhan** of Gram Panchayat Basunga was also present in it. He got motivated and took keen interest and led in promoting TSC activities in his Gram Panchayat.



Shri Bisht contacted the villagers individually and also in focused groups to discuss the existing sanitation status of his Gram Panchayat. He motivated the people defecating in open to construct technically appropriate latrines. He emphasized on the behavioral changes necessary to promote total sanitation in the village and discussed in details with the villagers the various diseases caused by open defecation, un-safe disposal of solid waste and inappropriate disposal of children's faeces. He also organized various campaigns in his Panchayat to achieve open defecation free status of his Gram Panchayat.

Gram Pradhan, Shri Bisht motivated the lower income group households to construct low cost sanitary latrines by providing them employment opportunities through the Jawahar Rojgar Yojna. The school children and the teachers of the Primary School and Junior High School were individually contacted and school children sanitation rallies were organized to promote domestic and environmental sanitation in the Gram Panchayat. In the regular meetings of the Gram Panchayat, villagers especially women were motivated to construct latrines by emphasizing on the advantages of household sanitary latrines. They were also told importance of individual household sanitary latrines in checking occurrence of diseases like diarrhoea, jaundice, etc. caused by unhealthy sanitary conditions. The Gram Pradhan Shri Bisht, was instrumental in promoting low cost sanitation options among the villagers. He facilitated the construction of

individual household sanitary latrines by arranging for transport of sanitary materials like seat, P-trap, etc. from Uttarkashi to the Gram Panchayat to make latrine construction cost effective.

On account of the concerted efforts of the Gram Pradhan, 31 Household Sanitary Latrines (3 BPL and 28 APL households) were constructed in short period and consequently the practice of open defecation in the Gram Panchayat has now been done away with. The Gram Panchayat is now declared “Nirmal” (open defecation



free).The villagers are very happy on being rewarded with the “**Nirmal Gram Puraskar**” with an amount of Rupees Two Lakh in cash and a certificate of excellence by His Excellency Sh. A.P.J. Abdul Kalam. The GP is now a source of inspiration for other Gram Panchayats. The credit for this achievement mainly goes to the Gram Pradhan, Shri Pratap Singh Bisht, the representatives of Panchayati Raj Institutions and the staff of the DPMU.