

Jal Sanskriti

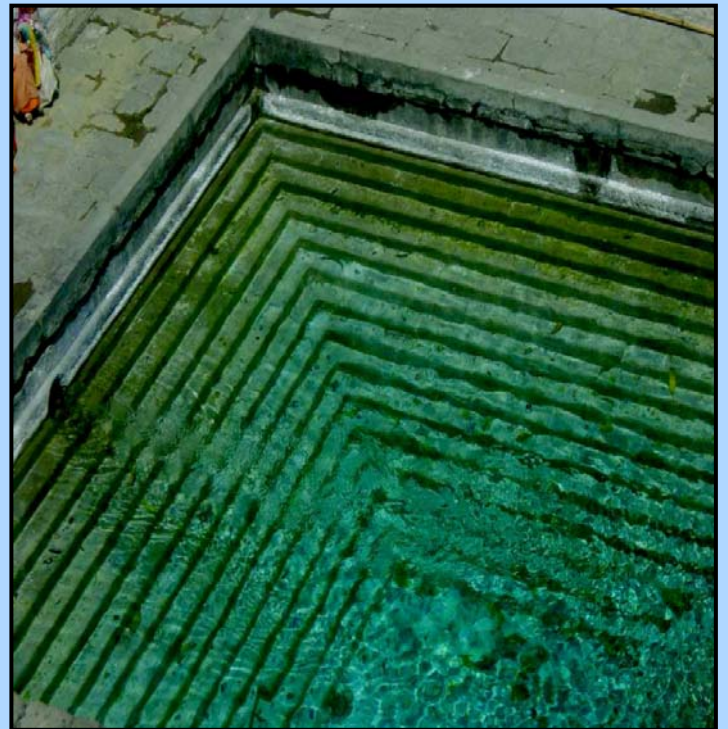
From Consumption to Conservancy



Survival Lessons



Himalayan Jal Sanskriti



Progress Report, 2002-04
Ford Foundation Grant # 1005 - 0476

Jal Sanskriti: From Consumption to Conservancy
Progress Report
Year Three (2002-03), Extension Period (2003-04)

Grant Details	<p>Proposal submitted: December 1999 Proposal approved: January 2000 Ford Foundation Grant #1005-0476, January 2000. Grant Amount: US\$ 96,980</p>																		
Grant Recipient	<p>Peoples' Science Institute 252/I Vasant Vihar, Dehra Doon 248 006. INDIA Phone: +91-135-2773 849, 2763 649 E-mail: psiddoon@sancharnet.in Web: http://www.psi-india.org</p>																		
Abstract	<p>Although endowed with an abundant supply of water, people in the western-central Himalayan region, namely Himachal Pradesh and Uttarakhand, suffer from a variety of water problems. The <i>Jal Sanskriti</i> programme aims to identify the root causes of these problems through a process of critical research and documentation. This is to be followed by information dissemination and consensus-building with a variety of stakeholders to advocate sustainable approaches to water management.</p>																		
Highlights	<ul style="list-style-type: none"> • Mobilization Workshop organized • Excursion tour completed • Orientation workshops series completed • Publication and release of <u>Survival Lessons</u> monograph • Mid-size hydram prototype produced 																		
Review	<p>The highlight of the period under review was the Mobilization Workshop. It brought together a galaxy of persons representing all sections of the stakeholders involved with water resources management in the western-central Himalayas. It put the <i>Jal Sanskriti</i> programme on the centre stage of water resources management activities in the region. The publication and release of <u>Survival Lessons</u> was another feather in the Programme's cap. The programme goal of evolving a consensus on sustainable water resources management approaches has been largely met. It has laid the ground for the implementation of demonstrated best practices for water resources management in the mountain region. Despite the extension of one year, however, some activities still remain to be completed. These relate to the publication of the Status Report, newsletter number 8 and three technology manuals. The final review conference and the accompanying PAC meeting have to be held.</p>																		
Financial	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Amount Released (Rs.)</th> <th style="text-align: center;">Expenditure (Rs.)</th> </tr> </thead> <tbody> <tr> <td>Year One</td> <td style="text-align: center;">12,45,000</td> <td style="text-align: center;">7,68,211</td> </tr> <tr> <td>Year Two</td> <td style="text-align: center;">14,65,000</td> <td style="text-align: center;">11,18,135</td> </tr> <tr> <td>Year Three</td> <td style="text-align: center;">17,94,457</td> <td style="text-align: center;">13,22,705</td> </tr> <tr> <td>Year Four</td> <td style="text-align: center;">Nil</td> <td style="text-align: center;">10,57,230</td> </tr> <tr> <td>Total</td> <td style="text-align: center;">45,04,457</td> <td style="text-align: center;">42,66,281</td> </tr> </tbody> </table>		Amount Released (Rs.)	Expenditure (Rs.)	Year One	12,45,000	7,68,211	Year Two	14,65,000	11,18,135	Year Three	17,94,457	13,22,705	Year Four	Nil	10,57,230	Total	45,04,457	42,66,281
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Programme Overview

The western-central Himalayan region is naturally endowed with an abundant supply of water. Some of the most important river systems in the Indian subcontinent arise here and this natural abundance of water has sustained mighty civilisations for millennia. Despite this natural bounty, the region faces a variety of water problems, and related development challenges. Funded by The Ford Foundation, Peoples' Science Institute (PSI) undertook a comprehensive programme entitled *Jal Sanskriti : From Consumption to Conservancy*. The primary objective is to promote processes, technologies and policies that lead to sustainable, equitable and productive management of water resources in this region.

The approach of the *Jal Sanskriti* programme is to research, document and critically analyse various aspects of water history and the current status of traditional management systems, irrigation, household water use and energy generation in the western-central Himalayas. This is complemented by an effort to create consensus among a wide audience, ranging from women in villages and community-based organisations to regional VOs and important government agencies, about the history of water management in the region, the nature and evolution of current problems, and effective solutions for the future. Information dissemination through newsletters, workshops, exhibitions and exposure visits is being used to showcase successful technologies and water management systems that are appropriate and promising for achieving a water-secure future in the region.

The programme has spanned a four-year period, from 2000 to 2004, during which time we have created a base for the replication and dissemination of sustainable technologies and an awareness and demand for sustainable water management systems in the western- central Himalayas.



Programme Activity Summary

The schedule of activities for the programme are summarised in the table below. Activities that have been completed are indicated in blue text, current activities are in green text, overdue activities are in red text, and activities that were not conducted are cancelled out.

Year 1 2000-01	Year 2 2001-02	Year 3 2002-03
Formation of PAC	Progress Report	Progress Report
PAC Meeting 1	Newsletter Publication <ul style="list-style-type: none">• Issue 1	Newsletter Publication <ul style="list-style-type: none">• Issue 5

	<ul style="list-style-type: none"> • Issue 2 • Issue 3 • Issue 4 	<ul style="list-style-type: none"> • Issue 6 • Issue 7 • Issue 8
Publication of Institutional Source Book (Hindi)	Five Orientation Workshops in H.P. & Ukd	Two exposure tours in Uttarakhand and two exposure tours in Himachal Pradesh
PAC Meeting 2	PAC Meeting 1 (July'01)	PAC Meeting 1
Draft Status Report on Water Resources Management in the Central Western Himalayas	Research and Documentation Projects 1. Traditional Water Management in Himachal Pradesh 2. Historic <i>Naulas</i> of Kumaon	Publication of Research & Documentation Projects 1. Survival Lessons: Himalayan <i>Jal Sanskriti</i> 2. <i>Jal Sanskriti</i> Calendar for 2003
	Technology Manuals 1. LDPE-lined tanks	Publication of 3 Technology Manuals
PAC Meeting 3	Four Technology Demonstration Centres established for exposure visits	PAC Meeting 2
Publication of Status Report	PAC Meeting 2	Mobilization Workshop

Activity Highlights

The primary objective of the programme is to promote processes, technologies and policies that lead to sustainable, equitable and productive management of water resources in the western-central Himalayas. The first year (2000-01) was devoted to research and documentation of the critical issues. In the second year (2001-02), while research and documentation continued, the emphasis shifted to information dissemination and the – by initiating a newsletter called *Jal Sanskriti* – building of a consensus (through a series of five workshops) on desirable approaches for sustainable, equitable and productive management of water resources in the region.

In the programme proposal it was stated that in the third and final year of the programme the initiatives of the previous years would be continued and the programme brought to a conclusion. During the period under review, therefore, the proposed research and documentation, replication of appropriate technologies and processes and consensus building were completed. While several publications were brought out, a few remain to be completed. The activities undertaken are highlighted below.

Programme Advisory Committee Meetings

A PAC meeting in 2002-03 was scheduled to be held just before the Mobilization Workshop. Due to the postponement of the workshop, the meeting was rescheduled for May 22, 2003. It was felt that a brief review of the progress could be presented to the Committee members before the start of the workshop and a more thorough review could be held after the workshop. Despite our best efforts and the presence of all the Committee members at different times in the workshop, we could not bring them all together at one time for a meeting. As a substitute, an informal discussion was held on May 23, 2003 in the presence of Dr Shekhar Pathak, Dr B.K.Joshi, Ms Anuradha Thakur and some of the *Jal Sanskriti* programme staff led by Dr Ravi Chopra. The Committee members expressed satisfaction with the Mobilization Workshop. They pointed out shortcomings in the preparation of the chapters on domestic water supply, irrigation, watershed development and technologies, for the proposed Status Report. Given the timing of the workshop, at the start of the period for formulating the state water policy, it was suggested that the *Jal Sanskriti* staff play an advocacy role as a culmination of the entire *Jal Sanskriti* programme.

Research & Documentation

Status Report on Water Resources Management in the Western-Central Himalayas: A major goal during this period was to finish the preparation of the draft chapters of the proposed Status Report in time for presentation at the Mobilization Workshop.

Jal Sanskriti Workshops



Mobilization
Workshop May
22-24, 2003

Orientation
Workshop
October 28-29,
2002



State Water
Policy
Advocacy
Workshop

Accordingly, the following draft chapters were prepared before the Mobilization Workshop:

- Survival Lessons: reviewing the history, bases and present status of water resources management traditions in the region.
- Sisyphean Labours: A critical analysis of domestic water supply in the western-central Himalayas.
- Special Programmes: Swajal and micro-hydro power programmes in the region.
- The Legal Framework for Water Resources in Uttaranchal and Himachal Pradesh: an historical analysis of the evolution of water management rules and policies in the region and recommendations for a desired legal framework for water resources management.

The information presented in these chapters was based on research and documentation projects commissioned or undertaken earlier in this programme. The presentation on watershed development made at the mobilization workshop was later converted to another chapter. Two additional chapters on appropriate technologies and policy issues remain to be completed. The draft chapters are attached as Annexure 1a.

Consensus Building

A major goal of the programme is to develop a regional consensus, cutting across the spectrum of stakeholders, on desirable practices, technologies and policies for sustainable, equitable and productive management of water resources in the region. During the review period two workshops were organized for this purpose.

Orientation Workshop: Following a recommendation of the Project Advisory Committee (PAC), a series of six workshops were planned to present the outcomes of the research and documentation work on water management and build a consensus on the desired technologies, management systems and policies among various groups of stakeholders including villagers, representatives of Mahila Mangal Dals, PRIs, officials from block and district administrations, engineers from water-related departments and state agencies and VOs. Five workshops in this series were organized in 2001-02. The last workshop was organized in Dehra Doon on October 28-29,2002, with officers from Himachal Pradesh and Uttarakhand. Eleven officials from HP, eight from Uttarakhand, two resource persons and the *Jal Sanskriti* staff from PSI participated in the workshop.

The format of the workshop followed the earlier ones. The proceedings (See Appendix 1a) were divided into five main sessions:

- Introduction to the *Jal Sanskriti* programme, followed by introductions of the participants along with brief statements of the water problems in their regions and efforts to tackle them.

- *Jal Sanskriti* presentation: The *Jal Sanskriti* programme staff presented the major findings of the research and documentation projects. The topics covered were: (i) Current status of water availability and major challenges in the western-central Himalayas. (ii) Estimates of water availability and fundamental problems in water management. (iii) A review of government schemes to provide water. (iv) Traditional systems of water management, the importance of culture (*sanskriti*) and traditional perceptions of water, and the current status and value of traditional systems.
- Technology presentations: Guest speakers Deepak Sharma and Jagdish Bhandari, both practising professional engineers, made presentations on micro-hydro power generation and rainwater harvesting technologies. Debashish Sen. and Narendra Jamwal of PSI spoke on deep infiltration wells.
- Group Discussions: Three groups were formed to discuss the following questions: (i) What difficulties are faced by officials in the implementation of water related programmes and how are these tackled? (ii) What administrative and practical difficulties will arise in transferring water resources management to PRIs and what will be the role of the state agencies thereafter? (iii) Does culture have a role to play in sustainable water resources management? (iv) What technologies need to be developed/promoted for appropriate use, conservation and systematic management of water resources? The discussions of each group were shared in a plenary.
- Valedictory Session: The recommendations of the participants were summarized and approved.

The main recommendations emerging from the workshop were: (i) Water resources development plans should respond to the felt needs of the people and their implementation should be free from political interference. (ii) PRIs should be enabled to plan, implement, operate and maintain water resources schemes. State agencies or departments should manage inter-village projects. (iii) Water resources development plans should take into account cultural aspects and traditional knowledge. (iv) Rainwater harvesting technologies should be given primary importance. They should be simple, low-cost and suited to the local resources and requirements.

Contrary to our earlier expectations, the officials agreed with the non-government stakeholders of the earlier workshops that water resources management needed to be decentralized. They differed, however, with the earlier recommendation that ownership and control of water resource should be transferred to the local communities. There were clear differences on this issue even among the officials present with some supporting the non-government viewpoint expressed earlier. There was some disagreement as to how far traditional technologies could serve the needs of a growing population. There was substantial interest in appropriate technologies like microhydels and rainwater harvesting systems, and many requests for additional information and training in the various regions that the officials were working in.

Mobilization Workshop: This workshop was organized in Dehra Doon on May 22-24, 2003 as a culmination of the consultative exercises (See Appendix 1b). The *Jal Sanskriti* programme staff and associated researchers presented the findings of their research and documentation work for critical evaluation by a galaxy of stakeholders. The workshop was also aimed at preparing recommendations for the water policies of the states of Himachal Pradesh and Uttarakhand. Appreciating the importance of this workshop, senior officials of the Governments of the two states took part in the programme. In all, 66 persons participated in it (See Appendix 1b).

In the inaugural session, Dr Ravi Chopra, Director PSI outlined the objectives of the *Jal Sanskriti* programme and its accomplishments while welcoming the guests. During his inaugural address, Shri Narayan Dutt Tiwari, the Chief Minister of Uttarakhand expressed admiration for the *Jal Sanskriti* programme and hoped that it would create awareness of the nature of the region's water problems and lead to meaningful action. Shri Tiwari told the audience that he would accept the conclusions stated in the paper on the legal framework for water resources management in the state, on behalf of his government. Shri Madhukar Gupta, Chief Secretary, Government of Uttarakhand, reiterated the importance attached to the workshop by the Government of Uttarakhand. Dr R.S.Tolia, Forest and Rural Development Commissioner, Government of Uttarakhand and Ms.Anuradha Thakur, Director, Department of Panchayati Raj and Rural Development, Government of Himachal Pradesh also addressed the participants in a similar vein.

Shri Narayan Dutt Tiwari also released Survival Lessons, the first book produced by the *Jal Sanskriti* programme. He complimented PSI for its splendid effort. He immediately ordered 50 copies to take with him to the conclave of Congress Chief Ministers in Srinagar, the following week. Later, the Government of Uttaranchal ordered another 150 copies to give away as prizes for essay competitions to be held on June 5th, the World Environment Day.



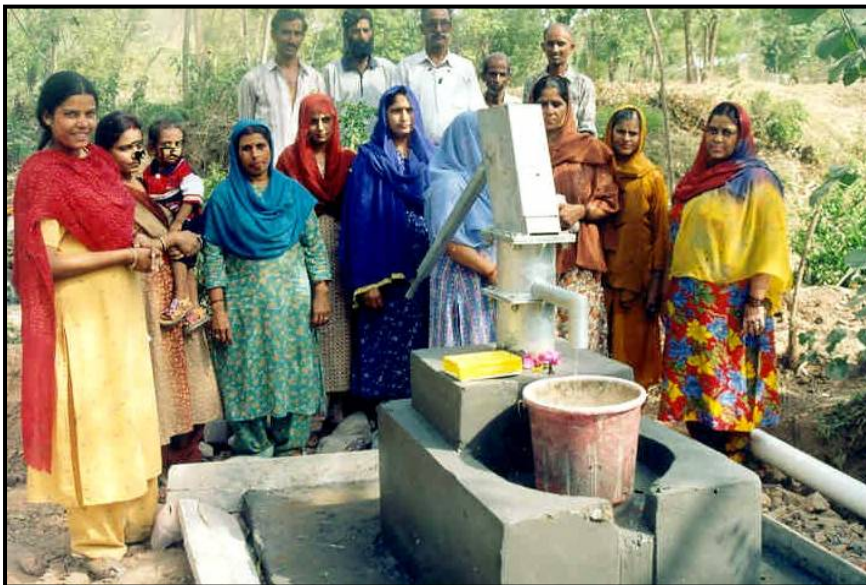
Technologies



Micro Hydel



Hydrum



**Deep
Infiltration
Well**

The technical sessions covered the following subjects:

- Traditions of water resources management in the western-central Himalayas.
- Domestic water supply in the mountain region.
- Status of irrigation in the region.
- Watershed development programmes in the western-central Himalayas.
- Appropriate technologies (rainwater harvesting, hydrams, micro-hydropower generation and deep infiltration wells).
- Legal framework for water resources management in the western-central Himalayas.

The valedictory session discussed the major recommendations emerging from the workshop proceedings. These included:

- Traditional, community-based resource management systems hold many lessons for our times, though inequities in the traditional systems must be eliminated.
- Accurate and reliable data of water availability and demand should be collected on a micro-watershed basis and be made available publicly.
- Water resources management has to be done on a catchment basis. Water use should be preceded by water harvesting and conservation measures. Hence water management must be integrated with land and forest management.
- Natural resource management should be the responsibility of local communities. Ownership, control, use and management of water resources should vest with the local community. Panchayati Raj institutions must be enabled to do so through rights to resources, funds, functions and functionaries. The state and its agencies should play a supporting role to the PRIs. Centralizing influences, e.g., large dams, power grids, large irrigation systems must be resisted in the mountain region.
- Customary laws and practices should be recognised by formal laws and water rights. Formal laws need to be reframed to accommodate decentralized functioning, enhanced equity and strengthen the community vis-à-vis the private. For genuine decentralization to take place, changes will be necessary in the Constitution of India and state laws.

A large exhibition on *Jal Sanskriti* was organized at the workshop premises. It included a photographic display of (i) the historic *naulas* of Kumaun, (ii) traditional water harvesting structures in Himachal Pradesh, (iii) water and culture and (iv) sustainable technologies. Also on display were materials on watershed development, water quality testing and a unique digitised map of Uttarakhand developed by People's Science Institute.

Excursion Tours

Ufrenkhal



Hamirpur

Kasar Trust



The workshop was quite a unique event, as evident from the written remarks of two participants. “First, the network of partners assembled was broad, mutually supportive with little apparent friction or ‘turf’ issues, and critically, represented an impressive mix of civil society, highest level decision makers including the UA Chief Minister and Principal Secretary, government officials, academicians, farmers, SHG members, etc. This mix of partners actually demonstrates significant potential to make important contributions to reorienting the development priorities of the region; at the same time, leads to a wide array of potentially conflicting, or least diverging, interests. The implications of this will need to be fathomed further by PSI.

“Second, and this is a rare and valuable find, the content of the discussions ranged from cultural underpinnings and belief systems of water management right through to legalistic interpretations of land and water acts or technical specifications of hydrams, for example. In between these extremes, the presentations were populated with data – largely secondary, but with some important primary data – that were used to draw lessons, generate conclusions or at least indicative directions for follow up action and research. Having said that, it appeared that the integration of these disparate elements was tentative and could have used significantly more thought and discussion both by the PSI team beforehand, and by the participants ourselves at the workshop.”

Several participants pointed out important elements that were missing from the presentations. Incorporating these suggestions into the draft chapters should lead to the publication of an exciting and significant book.

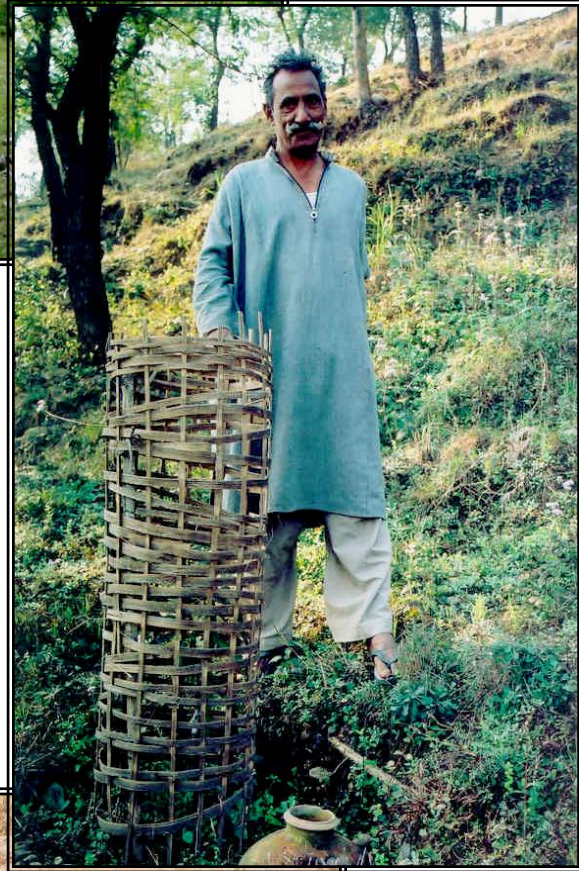
Technologies Diffusion Campaign

Technology Demonstration Centres: The research and development work done in the earlier years of the programme had revealed a few innovative and effective technological initiatives being experimented upon in Uttarakhand and Himachal. Among the more prominent ones are at:

- Sukhomajri, near Chandigarh, where community managed afforestation and water harvesting initiated by CSWCRTI have led to remarkable ecological regeneration and economic development.
- Ufrenkhal, in Pauri Garhwal district, where communities led by Doodhatoli Lok Vikas Sansthan, have developed water sanctuaries.
- Mankot, in Bageshwar district, where Kasar Trust has pioneered the development and spread of deep infiltration wells to tap underground seepages for domestic water supply.

The *Jal Sanskriti* programme has spread awareness of water sanctuaries and deep infiltration wells by writing detailed articles about them in its newsletter. This newsletter (see discussion later) is published in Hindi and mailed to almost 1500 persons, mainly in Himachal Pradesh and Uttarakhand. The *Jal Sanskriti* staff arranged with the villagers of Sukhomajri and the heads of Doodhatoli Lok Vikas Sansthan (DLVS) and Kasar Trust to

Impact



host exposure tours of persons willing to learn from their experiences. Thus, these three initiatives were selected as Technology Demonstration Centres. Later, PSI's own watershed development project in Hamirpur district (H.P.), where the experiments of DLVS and Kasar Trust have been replicated, has also become a Technology Demonstration Centre so that people from Himachal Pradesh can also study these technologies.

Exposure Tours: Between September 2002 and February 2003, 174 individuals, including over 60 women, from Pithoragarh, Naini Tal, Bageshwar, Pauri, Rudraprayag, Chamoli, Tehri Garhwal and Uttarkashi districts in Uttarakhand, and Shimla, Mandi, Bilaspur, Kangra, Hamirpur and Sirmour districts in H.P. were taken on exposure tours to the three main Technology Development Centres (See Appendix 2). One group in Uttarakhand also visited the Dasholi Gram Swarajya Mandal's work area in Chamoli district to learn about community mobilization from people who had been in the forefront of the Chipko movement. The tours in Himachal also visited ARTI in Rajgarh (Sirmour district) which had also installed deep infiltration wells. In each team, there were men and women, common villagers, PRI representatives, members of CBOs and a few staff persons from voluntary organizations.

In addition to the water sanctuaries and deep infiltration wells, the tours in Uttarakhand also saw community afforestation and forest management activities in Ufrenkhal and Chamoli. In Himachal Pradesh, they visited the H.P. Forestry and Horticultural Sciences University at Nauni (Solan district). One group also visited RUCHI, a VO in Bandh (Solan district) to see its work on developing a mini-hydrum.



The excursion tours have led to replication of the technologies at several locations. Villagers from Pithoragarh, led by Shaikshanik Gramonnati Sansthan, have dug trenches on mountain slopes and planted trees around them to create a small water sanctuary. Similar efforts have been reported by Hitaishi, a VO working in Bageshwar district. In Naini Tal district, a village has dug 1500 trenches as a catchment treatment work of a SWAJAL project, facilitated by a VO (Aarohi), after returning from Ufrenkhal.

The efforts of DLVS and Kasar Trust have had a big impact on the watershed development activities facilitated or supported by PSI, itself. Study tours to these sites are a part of the community mobilization exercises in all the watersheds where PSI is involved. The first two deep infiltration wells (DIWS) in Hamirpur district were installed in watersheds where PSI is providing development support. The villagers in Ratian and Dabker now have an assured source of water for domestic use. They contributed about 20 per cent of the cost (~Rs115,000) of these structures. In Dabker, the local Mahila Mandal manages the well now. Similarly, villagers who faced severe shortages of domestic water in Tehri Garhwal (Inangad watershed) and Mandi (Kotlunala watershed) districts have planned to install 6 DIWs at a cost of Rs 215,000 out of which the community contribution is Rs 31,880, or 15 per cent.

The example of Ufrenkhal has been equally effective. Eleven villages from eight micro-watersheds in Pauri district has created water sanctuaries over 48 ha. Villagers

Publications

Survival Lessons

Himalayan Jal Sanskriti

परिचय-मध्य हिमालय में जल प्रचलन पर लोक विज्ञान संस्थान की पत्रिका

जल संस्कृति

अंक - 7 सीमित वितरण

सम्पादकीय

अब घोषणा पर अमल की बारी

परिचय-मध्य हिमालय (हिमालयन इस्टेज और जलसंस्कार) में पानी मिलाना अधिक है, पानी के अभाव की संकट की कल्पना नहीं है। जल पर जो अमल चली बहाव को प्रतिबंध करने वाले इस मू-मध्य में भी वी या रहते, पानी की शून्य-हम सब जगह नहीं रहती है। अभी लोगों को पानी का पूरा पानी नहीं मिलता और पानी खोती का अभाव का प्रतीक विना सिधई की है।

पानी है लेकिन पानी मार तर करने, खोती की पानी सुखने की संकलित व्यवस्था नहीं है। योजनाकार बहुत आसानी से यह समझे हैं कि बरिभाय और पानी ऊपर खेचई पर है और पानी नीचे खट्टी-नाली में बर

दूज : कुँज, में


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संस्कृति 1864 में स्थापित कुमाऊँ संस्कृति, श्री विष्णुनाथ शर्मा, एडिटर, एडिटर विज्ञान संस्कृति

जल संस्कृति

2003



कुमाऊँ के ऐतिहासिक नौले

from Naithana, Than and Marora villages believe that the flow in springs below the treated area has increased. Similar activities are planned over 200 ha in 50 watershed villages of HP and Uttarakhand where PSI is providing development support.

Technology Development: The visit to RUCHI in HP and the review of the performance of hydrams installed by state agencies in Uttarakhand and HP, have convinced PSI that it is an ideal water lifting technology for the mountain region. But the government systems are too large and the LEDG-RUCHI model is too small for individual farmers or their SHGs. Accordingly, PSI decided to develop its own expertise on hydrams and manufacture a low-cost but medium-sized unit that can be used to irrigate the typically small farm plots in the mountain region.

After promoting the RUCHI-LEDG model for almost two years, in September 2003 PSI started developing its own model. With some technical assistance from Dr Sunil Kale, Professor of Mechanical Engineering at IIT-Delhi, a prototype has been developed and tested. PSI is now in the process of installing about 8 or 10 prototypes in various watersheds where it is involved. The plan is to study the performance of these installed units for a year. After making necessary improvements in the prototype, PSI will manufacture and market the new model.

Information Dissemination

In addition to the technology diffusion campaign, PSI is also disseminating information about traditions, technologies, processes and policies of water resources management through publications and a photo exhibition. New products like CDs are also planned. The activities undertaken so far are described below.

Jal Sanskriti Newsletter: The *Jal Sanskriti* newsletter issues 4, 5, 6 and 7 were published during the review period (See Annexures 2a, 2b, 3d). The mailing list for the newsletter has grown tremendously, with over 1,500 people currently receiving the newsletter in Himachal Pradesh and Uttarakhand. There was a strong response to the newsletter during the year, and several subscribers corresponded with PSI requesting additional information about various water management issues and technologies. During the year, the newsletter carried features on technologies like *gharats* (Number 5) hydraulic ram pumps (No.5) and microhydel (No.7), water management issues, literature reviews and interviews. During the course of the year, the newsletter has become an effective medium for disseminating information about successful water management practices, especially to panchayats and community groups that are facing water problems and trying new approaches to solve their water woes.

The newsletter has been gaining attention outside the mountain region also. 150 subscriptions for it were received for VOs across the country, through the efforts of the Social Work and Research Centre, Tilonia. The last issue, number 8, under the *Jal Sanskriti*, programme is under preparation. PSI intends to continue publication of the newsletter as a quarterly, even after the grant is over. A sponsor has been identified to cover the production and mailing costs.

Jal Sanskriti Calendar: The JS team produced 5000 copies of a 2003 calendar (See Annexure 3a) featuring the historic *naulas* of Kumaon, which was primarily targeted at panchayats and communities in Uttarakhand. The calendar featured 14 *naulas* that were documented as part of the research and documentation project on the historic *naulas* of Kumaon. It featured the architecture, longevity and religious/cultural aspects of water of these traditional water management structures. The calendar effectively communicated the importance and continuing relevance of *naulas* in Uttarakhand for rural communities, and many of the recipients in the villages appreciated this significance of the *naulas*. 3700 copies of the calendar were purchased by the Government of Uttaranchal and distributed to panchayats across Kumaon. Distribution of another 1000 copies were sponsored by a company in New Delhi. The calendar was also well received by other voluntary organisations, writers and researchers, as evident from the correspondence received. Its format as a planner has also been appreciated.

In 2004, 3000 copies of a calendar (See Annexure 3b) on Himalayan *Jal Sanskriti* were produced by PSI from its own funds. The 2003 calendar is in Hindi; the 2004 calendar is in English. The new calendar features 14 important traditional water harvesting structures of Himachal Pradesh and Uttarakhand. It has drawn equally appreciative comments as the first one. This calendar, being in English, has been distributed all over the country.

Survival Lessons: The *Jal Sanskriti* program produced a beautiful 68-page monograph (See Annexure 4) titled Survival Lessons. It has a 10,000 word essay that describes the variety of traditional water harvesting structures in the western-central Himalayas, the bases of their sustenance over centuries and a history of their decline. The text is followed by a photo essay that illustrates many important structures in the region. The monograph was released at the *Jal Sanskriti* mobilization workshop in Dehra Doon by Shri Narayan Dutt Tiwari, Chief Minister of Uttarakhand, on May 22, 2003. So far, half of the initial print run of 1000 copies has been sold.

The monograph is in English. PSI would like to produce separate versions for Himachal Pradesh and Uttarakhand in Hindi in large numbers.

Photo Exhibition: During the review period, the *Jal Sanskriti* staff has expanded the original photo exhibition on *Jal Sanskriti*. Now it has 4 parts: (i) The historic *naulas* of Kumaon, (ii) Traditional water harvesting structures in Himachal Pradesh, (iii) Water and Culture and (iv) Sustainable technologies. There are panels in all with – photographs and text. The exhibition is shown at events organized by PSI and other organizations.

Other Products: The Uttarakhand Youth and Rural Development Association, Chamoli district, was commissioned to prepare an instructional CD on the deep infiltration well technology. PSI will prepare more CDs along its lines.

State Water Policy Advocacy

In April 2002, the Government of India prepared a National Water Policy which was approved by the National Development Council. Thereafter, the GOI directed all the state governments to prepare State Water Policy (SWP) documents. In May 2002, the Government of Uttarakhand formed a Task Force of its senior officials for this purpose. The Task Force proposed a series of consultative workshops to be held between April 2003-June 2003 to propose recommendations for the SWP. The *Jal Sanskriti* Mobilization Workshop was considered by the GOU to be a part of this series. This led to the participation of senior officers of all the water-related departments in the workshop. Thus the recommendations of the *Jal Sanskriti* workshop were fed into the SWP formulation process.

The *Jal Sanskriti* programme staff was invited to take part in the final consultative workshop, before the actual drafting of the SWP, on September 6,2003 in Dehra Doon. The *Jal Sanskriti* team was one of the few non-government voices at this consultation. Since its basic propositions were at variance with the official viewpoints, it was asked to join the drafting group. The JS team, however, chose not to join the group but to submit its viewpoints in writing (See Appendix 3).

The SWP (Appendix 3) was critically analysed at a workshop held at PSI on October 22-23,2003. This workshop was attended by about 20 persons including well-known activists, intellectuals, journalists among others. At this workshop it was decided to mobilize public opinion against the anti-people aspects of the SWP draft. On behalf of the group Dr Chopra shared their concerns with the Chief Secretary of the GOU, Dr R.S.Tolia. The latter appreciated the concerns and agreed to have an alternative draft prepared by Dr M.S.Vani and Shri Rohit Asthana, policy analysts who had been present at the October 2003 workshop.

In keeping with the recommendations of the October 2003 workshop, a critique of the SWP was prepared for wider circulation (Appendix 3). Between November 2003 and March 2004, 13 local and 2 regional workshops have been organized by PSI with local VOs as collaborating organizations. Statements of concern by the participants at these workshops have been forwarded to the concerned government officers and people's representatives. At this stage it appears unlikely that the SWP will be ready by the target date of March 31,2004. This gives time to continue the mobilization and advocacy processes.

Programme Review

At the end of the period under review the major programme goals have been basically fulfilled. It has laid the ground for the implementation of demonstrated best practices and policies for water resources management in the western-central Himalayas.

The proposed research and documentation activities along with the consensus building work are over. Most of the technologies diffusion campaign activities have been completed; three technology manuals remain to be published. The main delay is in the production of publications. These include the newsletter # 8, the Status Report and three technology manuals on rainwater harvesting, hydrams and deep infiltration wells.

Programme Impact

What have we really accomplished in the *Jal Sanskriti* programme? First, we have created an awareness and appreciation of the region's rich heritage of water harvesting structures and systems and the role of *sanskriti* (culture) in managing water resources sustainably. Our research, documentation and publications on traditions of water resources management in the western-central Himalayas have led to this impact. In the current idiom, one can say that *Jal Sanskriti* is a brand created by PSI. This is evident from the articles and other publications that appear regularly in the regional print media. With the help of digital scanning, pictures from our publications are often reproduced elsewhere. The Watershed Management Directorate of the GOU produced a calendar in 2004 which copied the *Jal Sanskriti's* 2003 calendar. All this activity has had a cascading effect, leading to a renewed interest in the preservation of functioning traditional water harvesting structures and their catchments.

We recognize that the popular focus is on the rich heritage of structures, rather than a comprehensive focus on the structures, systems and the culture that has sustained them. Among scholars, however, we have awakened a comprehensive interest. (The *Jal Sanskriti* staff has been invited to make presentations on the subject in different parts of the country.) We also recognize that most of the cultural practices derive from scriptural precepts. In the present climate of growing religious chauvinism, establishing links between the scriptures and a culture of sustainability has to be done with utmost care, without pandering to the baser chauvinistic instincts of the religious fanatics.

Second, the *Jal Sanskriti* programme has been able to promote an awareness of new and appropriate technologies among a large cross-section of people involved in water resources management – watershed committees, CBOs, VOs, district and state officials. Implementation of deep infiltration wells technology and the concept of water sanctuaries is spreading in Himachal Pradesh and Uttarakhand as the result of our publications, excursion tours and the incorporation of these technologies in many micro-watershed projects supported by PSI.

The challenge now is to achieve a quantum jump in the scale of application of the sustainable technologies that have emerged from this programme. This can only be possible if government programmes, especially watershed programmes, adopt them. Given PSI's enhanced credibility with the state governments of Himachal Pradesh and Uttarakhand after the Mobilization Workshop, this can be done. Though it may not be easy to do so, it can safely be said that compared to other organizations PSI is in a pre-eminent position in this regard.

A second challenge in the promotion of these technologies is to ensure that their use leads to greater equity in society. From the equity point of view, water sanctuaries and deep infiltration wells are desirable. The promotion of the new mid-sized, low-cost hydram, however, will have to be done with care. It should be made a community tool rather than a private one.

The third critical accomplishment of the *Jal Sanskriti* programme is the generation of a debate on the need to decentralize the ownership of water and other natural resources. Our research on the traditions of water resources management has shown that local communities were able to manage water resources in a sustainable manner over centuries. The critical condition that made this possible was their ownership of local natural resources in practice, even though in principle all resources in a domain belonged to the ruler. We have presented historical analysis to show that sustainable water resource management requires giving autonomy to local communities – particularly in the rural areas – over their natural resources. This will enable them to manage forests and water in a holistic manner, which is essential for the sustenance of water sources in the mountain region. At the same time, greater importance must be given to technologies that lend themselves to decentralized implementation.

The *Jal Sanskriti* programme's advocacy of these concepts has received a very positive response from the rural community, especially the PRI representatives. The latter realise that they need greater support in the form of funds and technical expertise to manage these resources. Officials involved in administering water resources in the two states, however, are not keen on decentralizing ownership, planning and implementation of resources and projects. They are only willing to involve people in the repair and maintenance of assets that the departments have created. Most Panchayats are unwilling to accept the responsibility of maintaining government created assets.

We recognize therefore, that we have a difficult campaign ahead in promoting decentralization of ownership and management of water resources in Himachal Pradesh and Uttarakhand. An organization like PSI can only advocate. Success will depend on the strength of the demand for the appropriate rights which will have to come from the local communities and their Panchayati Raj and political representatives.

Programme Shortcomings

The major shortcoming has been our inability to complete the activities on time. In June 2003, Rishiraj Das, a key member of the team with excellent writing skills and

articulation took a leave of absence from the *Jal Sanskriti* programme to pursue higher studies abroad. Bringing in new persons and familiarizing them with the issues takes time. We were forced to make the difficult choice to delay rather than compromise on the quality of the work. We are confident, however, that all the remaining work – the publications and the final review conference will be over by October 2004.

We have not been able to convene regular meetings of the Programme Advisory Committee. The PAC was a new innovation for PSI when the *Jal Sanskriti* programme was formulated. Consequently it was not a regular feature of our work culture. We have thus been deprived of the PAC's timely inputs to guide our activities. To some extent, we have made up for this lacuna by maintaining regular contact with individual members of the Committee.

The Mobilization Workshop helped PSI to develop greater credibility and contacts at various levels of the state governments in Himachal Pradesh and Uttarakhand. We have not been able to use this asset to strategically promote appropriate technologies identified in the *Jal Sanskriti* programme.

Future Directions

The *Jal Sanskriti* programme has by now clearly laid the foundations for promoting productive, sustainable and equitable practices, processes, technologies and policies for water resources management in the western-central Himalayas. We have done considerable background research and documentation on these issues. Our information dissemination and consensus building campaigns have not only generated awareness and interest, but have also created a constituency to push forward the adoption of the programme's recommendations on a scale that will make a difference.

Having laid the foundation, we will have to work in a strategic manner to promote widespread acceptance of our recommendations. At present we see four components of such a strategy. These are:

1. Popularisation of sustainable water resources management practices and policies, through.
 - Publication of the *Jal Sanskriti* newsletter
 - An annual water festival
 - Operation of an interactive website.
2. Conservation of Traditional Water Structures
 - Five Fellowship to be awarded annually to local water activists who will be trained to mobilize and organize communities to renovate and maintain important but neglected water structures, along with promoting a culture, *Jal Sanskriti*, that recognizes water as a sacred resource. The expected outcome will be the creation of an activists corps, spread of *Jal Sanskriti*, and revival of water bodies/ structures.

3. Advocacy, through
 - Creation of a forum – with a membership of at least 1000 stakeholders – to push for sustainable water resource management policies and programmes.
 - Six orientation workshops a year for members of gram panchayats, zila parishads, voluntary organizations, block pramukhs and district-level administrators. Total coverage: about 500 persons.
4. Establishment of a network of five Technology Development and Training Centres (TDTCs) in Uttarakhand and Himachal.
 - Each center will focus on promoting a specific set of appropriate technologies, e.g., rainwater harvesting, water sanctuaries, deep infiltration wells, hydrams, and micro-hydel.

We have designed this strategy keeping in mind the competencies that we have developed during the *Jal Sanskriti* programme and the shortcomings that we have observed in its implementation. Thus research and publications work has been kept to a minimum in the next stage. The emphasis is on dissemination of information and advocacy of our approach. PSI will seek financial support to implement this strategy.

Financial Statement

The financial statement is attached on the next page. We had a balance of Rs 8,23,653.15 at the end of the second year (2001-2002) of the programme. In 2002-2003 we received a final instalment of Rs 17,94,457.00 of the grant. Out of the total amount of Rs 26,18,110.15 available to us during the review period, we have spent a total amount of Rs 23,79,934.60. We are thus left with a balance of Rs 2,38,175.55 as of March 15, 2004. We request The Foundation's permission to be allowed to carry forward the balance for the next six months and use it for the production of newsletter #8, three technology manuals and the Status Report.

FINANCIAL REPORT FOR GRANT NO. 1005-0476

Financial Statement for the period 01-04-2002 to 22-03-2004

(A) Opening Balance (Unspent balance, if any, carried over from the previous reporting period)		Rs. 8,23,653.15
(B) Funds received from the Foundation during this period (US \$37,267.95)		Rs.17,94,457.00
(C) Less: Funds expended during this period:		
(1) Staff support/consultants	Rs. 6,68,886.00	
(2) Res/Pub/Doc/Dissemination	Rs. 5,51,362.50	
(3) Travel	Rs. 1,41,497.00	
(4) Mtg/review/workshop/camps	Rs. 5,96,928.00	
(5) Admin/office/overhead	Rs. 4,21,261.10	
(6) Equipment	Rs. Nil	
TOTAL EXPENDITURE	<u>Rs. 23,79,934.60</u>	Rs. 23,79,934.60
(D) Closing Balance (A+B-C)		Rs. 2,38,175.55

Date:

Ravi Chopra
(Director)