

PEOPLE'S SCIENCE INSTITUTE



स्वच्छन्द किलकिलाती गंगा



की मौत

ANNUAL REPORT (2008 - 2009)



252, Vasant Vihar – 1
Dehra Doon – 248006
Uttarakhand



PEOPLE'S SCIENCE INSTITUTE

ANNUAL REPORT 2008-2009

I. NATURAL RESOURCES MANAGEMENT

Natural Resources Management (NRM) activities at PSI are conducted by the Centre for Participatory Watershed Development (CPWD). The Centre is mandated by CAPART, Ministry of Rural Development (MoRD), Government of India (GoI), to provide training, development, research and communication support to non-government and government organizations engaged in watershed or NRM projects in Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Uttarakhand and Uttar Pradesh.

In 2008-09 the Centre's work focused on enhancing food and livelihoods security potential in Himachal Pradesh and Uttarakhand through upscaling the System of Crop Intensification¹ and assisting village communities to plan for income generation from natural resources based occupations, trades and business. With a mandate from the Planning Commission and the Union Ministries of Panchayati Raj and Food & Agriculture, PSI facilitated a decentralized process for preparing District Perspective Plans under the Backward Regions Growth Fund (BRGF) programme for Tehri Garhwal, Chamoli & Champawat districts as well as a Comprehensive District Agricultural Plan for Tehri Garhwal district.

I.1 ACTIVITIES

I.1.A System of Crop Intensification (SCI)

SRI: Rice is a staple food in the mountain regions. Enhancing its productivity through the System of Rice Intensification (SRI) can lead to greater food security for farming families. The stalk volume of SRI paddy is also much higher, providing more fodder for cattle, more farmyard manure for fertilizing fields and possibly increasing milk yields. Therefore in 2006 PSI embarked on a mission to promote its widespread use in Uttarakhand and Himachal Pradesh with the goal of persuading the state governments to start a programme to spread SRI throughout the two states.



¹ The System of Crop Intensification is an innovative way of cultivating traditional crops that focuses first on the root rather than the plant. It leads to enhanced yields and savings in water, labour and seeds.



Starting with 40 farmers in 2006, CPWD assisted over 12,000 farmers to experiment with the SRI method in 2008-09 in Uttarakhand and Himachal Pradesh. The outcomes of this initiative are impressive as shown below.

State	No. of Farmers	Villages	Area (ha)	Grain Yield (Q/ha)			Straw Yield (Q/ha)		
				Non-SRI	SRI	% Gain	Non-SRI	SRI	% Gain
Uttarakhand	9201	358	195.43	34	56	65	122	172	41
H.P.	3013	138	57.55	45	65	44	99	118	19
TOTAL	12214	496	252.98	-	-	-	-	-	-

Source: CPWD field surveys, 2008.

Participating farmers have expressed immense satisfaction with increased grain and straw yields and the perceived benefits of saving seeds, water and physical labour. CPWD's scientists also undertook research trials to observe the effects of sapling age at transplantation, number of weedings and seed-sowing time on the crop yields. Best results were obtained by transplanting saplings that were only 8 to 12 days old and by weeding thrice during the season.

During training, methods of seed treatment, nursery raising, manure preparation and transplantation were practically demonstrated. CPWD produced and sold a user-friendly manual “श्रीधान विधि अपनाओ उत्पादन बढ़ाओ” to participating farmers. A Hindi film “श्रीविधि किसानों के लिये एक वरदान” was screened during training to show various procedures adopted in SRI and to inform the viewers about the benefits obtained by SRI farmers in previous years. CPWD also undertook an advertising campaign in Uttarakhand on a TV channel and newspapers to popularize SRI.

Strong linkages were established with local VOs, district agriculture departments, Krishi Vigyan Kendras, agricultural universities and research institutions in both the states for the promotion of SRI. A Programme Monitoring Committee was constituted in each state with representatives from institutions like Central Soil and Water Conservation Research & Training Institute, Dehra Doon; Govind Ballabh Pant University of Agriculture and Technology, Pant Nagar; Rice and Wheat Research Centre, Palampur; Palampur Agriculture University and Vivekanand Parvatiya Krishi Anusandhan Sansthan, Almora apart from senior personnel at PSI. External scientists carried out periodic field reviews to identify the impact of different interventions and to interact with farmers. CPWD conducted orientation workshops for Chief Agricultural Officers and Agriculture Development Officers in the different districts of Uttarakhand.

The Centre's SRI work in Uttarakhand was supported by Sir Dorabji Tata Trust, while the same programme in Himachal Pradesh received support from the World Wide Fund for Nature (India). The Agriculture Directorate of Uttarakhand provided financial assistance to meet a part of the capital equipment and manure costs.

SWI: Inspired by the SRI results, in 2006-07 CPWD conducted the first documented trials anywhere in the world on the System of Wheat Intensification (SWI) at its Niranjapur farm.²

² Personal communication, N. Uphoff, Cornell University, October 26, 2007



Seeds of two varieties of wheat - HD-2329 and PBW-396 were sown at distances of 20cm between rows and 15cm between plants. An average increase of about 25-55 per cent in grain yields from the SWI plots compared to the conventional method was recorded from the trials.

In 2007-08 CPWD conducted further wheat trials on 35 farm plots in Uttarakhand and 15 in Himachal Pradesh, under irrigated and unirrigated conditions. The average productivity of irrigated wheat went up from 22 Q/ha to 43 Q/ha, i.e., an increase of about 95 percent in grain yields. Similarly, under unirrigated conditions, the average yield increased by about 63 per cent from 16 Q/ha to 26 Q/ha. The straw yields from SWI crop under irrigated and unirrigated conditions increased by about 87 and 48 per cent respectively. SWI farmers have also been very pleased with the results. PSI is further popularizing the SWI technique and promoting its extension in the mountain states by organizing field visits of farmers from neighbouring villages.

SCI: In 2008-09 CPWD and its partners began field trials on intensifying the production of rajma (red kidney beans) and mandwa (finger millets). The results are encouraging as shown below.

Crop	Number of Farmers	Area (ha)	Grain Yield (Q/ha)		% Gain
			Conv.	SCI	
Rajma (Red Kidney Beans)	113	2.26	18	30	67
Mandwa (Finger Millets)	43	0.8	15	24	60
TOTAL	156	3.06	-	-	-

Source: CPWD field surveys, 2008

In its Annual Agricultural Plan (2009-10) the Government of Uttarakhand has announced the promotion of SRI in the state with the help of PSI. Officials of the Government of Himachal Pradesh have also expressed willingness to do the same in the following year. Thus a major objective of PSI's SCI programme has been achieved. In future PSI proposes to expand the area under the different crops so that farming families can achieve food and livelihood security. It will also consider starting new initiatives in hilly and drought-affected regions like Bundelkhand.

I.1.B Sustaining Mountain Livelihoods

As a follow up to its earlier watershed development programmes in Himachal Pradesh and Uttarakhand, PSI initiated a three year (2008-2010) programme, Sustaining Mountain Livelihoods, for enhancing rural livelihoods in the two mountain states with the financial support of the Himmothan Pariyojna of Sir Ratan Tata Trust. The primary aim of this programme is to increase household incomes and food security.



In the first phase of the programme (January 2008 to March 2009), CPWD and four other POs facilitated the



preparation of livelihoods development plans (LDP) in a participatory and transparent manner in 30 villages.³ The primary focus is on raising household incomes through irrigation, fodder development, animal husbandry, agronomic and horticultural measures, and secondary income generation activities like poultry, goat rearing, off-season vegetable cultivation and others.

These LDPs will benefit 1241 households, including 40 per cent SC/ST and 13 per cent OBC families. Their total estimated budget is Rs. 3.34 cr, about Rs. 11.00 lakhs per village or Rs.27,000/household. Village communities will contribute about 23 per cent and about 37 per cent will be sourced from government schemes. The remaining 40 per cent have been sought from SRTT. It is expected that these measures will enable almost all the families to rise above a perceived poverty line of Rs. 8,000 per capita per annum.

CPWD has trained two members from each PO in preparing the LDPs. At the village level, village development committees, savings and credit groups and users' groups have been formed and strengthened for implementing them.

Draft LDPs prepared by the village communities have been reviewed by subject matter specialists from BAIF and BASIX and the Programme Advisory Committee of the project. Upscaling strategies are being designed for making the programme more replicable and sustainable. PSI has already initiated discussions with big retailers for establishing supply chain linkages. The programme has also begun publication of *आजीविका चेतना*, a half-yearly newsletter on mountain livelihoods.

I.1.C Facilitating Decentralized District Planning

In 2006 PSI was selected by the Planning Commission as one of 17 national training and support institutions (TSIs) to help facilitate a decentralized process of preparing district level development plans. This was in recognition of a similar process evolved by the Institute during the Gram Swaraj Abhiyan in Orissa. With the concurrence of the GoU, the Planning Commission and the Union Ministries of Panchayati Raj and Food and Agriculture selected PSI to act as a TSI for (i) the Backward Regions Grant Fund (BRGF) programme and (ii) the Comprehensive District Agriculture Plan (CDAP) preparation. This was done in accordance with the Panchayati Raj Act which provides for District Planning Committees to consult institutions/organizations specified by the Government for facilitating draft development plan preparation.

BRGF: PSI is responsible for facilitating participatory preparation of District Perspective Plans in three districts of Uttarakhand -- Chamoli, Tehri Garhwal and Champawat – selected under the BRGF programme.

To begin with CPWD conducted a sensitization workshop for block level officials and Zila Panchayat members of Chamoli district in March 2008. After approval of the plan preparation strategy by the district administrations it selected 33 Partner Organisations (POs) to cover 1870 Gram Panchayats, 4 Nagar Palikas and 12 Nagar Panchayats.

³ A key feature of these plans is that efforts have been made to analyze the needs of each and every household in the chosen villages.

It conducted two orientation workshops on district level visioning and helped the POs to form and train Block Support Teams (BSTs). The BSTs helped Gram Panchayats to constitute four member Panchayat Level Resource Groups (PLRGs), after due consultations with the Gram Sabhas, from among the following, Gram Pradhan, ward members, progressive farmers, Mahila Mangal Dal representatives, respected elders, or any other person capable of contributing to the needs assessments and planning for development in the area. Over 250 capacity building programmes were conducted to enable 7132 PLRG members to undertake visioning exercises and prepare development plans at the Panchayat level. Secondary data was added by a support team at CPWD. The Gram Panchayat plans have been consolidated at the block level. They await discussion and approval.⁴

CDAP: Initially CPWD organized meetings with the Tehri Garhwal district administration and selected 16 POs for facilitating the decentralized plan preparation process. Following a strategy similar to that in the BRGF programme CPWD and its partners selected and trained 3196 resource persons from all the Gram Panchayats to prepare Panchayat level plans. Secondary data was collected by the support team at CPWD and the Gram Panchayat plans were consolidated at the block level. The CDAP was approved by the Block Agriculture Planning Unit (BAPU).⁵ Farmers have proposed interventions in agriculture, horticulture, animal husbandry, sericulture, pisciculture, watershed development, agroforestry, community tourism and medicinal and aromatic plants cultivation for development of the agricultural sector in Tehri Garhwal. Specific goals have been identified for each intervention.



I.1.D Resource Management For Sustainable Livelihoods

In September 2008 CPWD completed an action research project “Linking Community-based Water and Forest Management for Sustainable Livelihoods of the Poor in Fragile Upper Catchments of the Indus-Ganges Basin”, in the Hilaungad watershed of Rudraprayag district (Uttarakhand).⁶ PSI was a part of a consortium of national and international organizations led by International Water Management Institute (IWMI)-Nepal. This project was funded by the Challenge Programme for Food and Water of CGIAR.

The project’s aim was to identify opportunities to ensure food and livelihoods security for poor families based on community managed water and forests. Participatory tools were used for livelihoods and institutional analysis, and assessment of resource gaps in six villages of

⁴ These plans have to be ultimately approved by the District Planning Committee in each district. But so far these committees have not yet been formed in Uttarakhand.

⁵ It received final approval from the District Agriculture Planning Unit (DAPU) on June 25th 2009

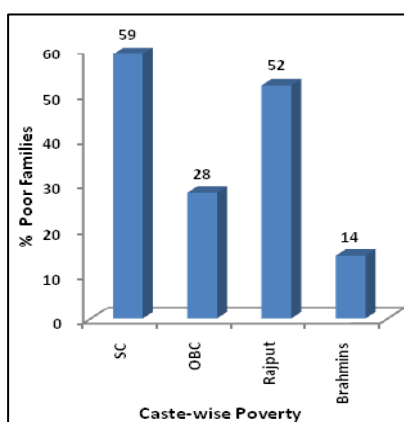
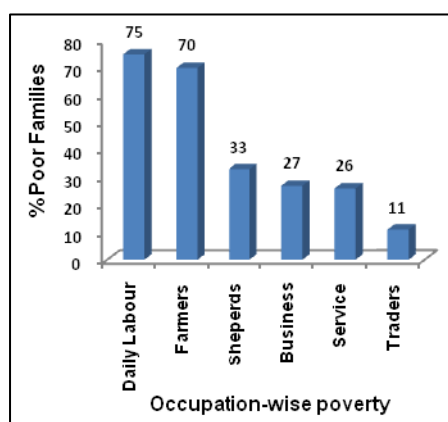
⁶ Hilaungad watershed is typical of the mountain region in Uttarakhand.



the watershed along with an assessment of equity (class, caste and gender). Studies on hydrology, soils and forests productivity were also carried out.

Livelihoods Analysis: The most striking feature of the livelihoods assessment study is that less than 16 per cent of the sampled households are primarily dependent on land, i.e., agriculture and livestock rearing, for their livelihoods. The rest depend on non-farm income sources. Service or pension is the primary income source for nearly half the households (45%). The second largest occupational group is of daily labourers (26%). These labourers are non-farm labour engaged in doing roadwork, house construction, etc. Business and trade are the major income source for the remaining 13 per cent households.

The minimum annual income required to meet basic living expenses as defined by the local people has been estimated at Rs. 7611 per person (Rs. 634.25/p/m).



This is about 33 per cent higher than the Planning Commission's estimated poverty line of Rs.478.02 for rural Uttarakhand in 2004-05 which, however, does not include education and health care expenses.

About 44% of the households in the selected villages are unable to meet these basic living expenses.⁷ The poor are mainly daily labourers or agriculturists by occupation, Scheduled Caste or Rajputs by caste or households headed by women. The study highlighted the need for poverty eradication programmes to focus on these households.

Resource Gaps: Analysis of resource requirements and availability reported significant gaps in terms of water, fuelwood, fodder, food grains and livelihoods. Fuelwood and fodder gaps are met from common property resources, mainly the reserved forests. Farm production provides well below 50 per cent of the annual requirement of cereals, vegetables and oil. Thus low farm production and inadequate land-based livelihoods provide the push for non-farm employment and outmigration.

Institutional Assessment: The institutional study reveals that traditional institutions of caste, kinship and panchayats are strong and enduring while the resource management institutions established in the last two decades are dysfunctional. Most of the latter have been formed as a result of government orders. People look at them as a governmental exercise and consequently do not show ownership of the development programmes or processes. Some community level

⁷ This compares favourably with the Planning Commission's estimate of about 41 per cent BPL families in rural Uttarakhand.

institutions created by VOs, however, have been able to involve them in the development process.

These studies have been shared with all the villages of Hilaungad watershed. To advocate policy recommendations, PSI organised a workshop in June 2008 which was attended by senior state officials, PRI representatives, representatives of Hilaungad Vikas Sangathan – a local platform created as a part of the project activities, VOs, subject matter specialists and IWMI-Nepal representatives. In addition to the above findings, it was also shown that a large potential exists in the mountain areas for increasing water, land and forests productivity. Given the good human assets, adequate precipitation, streams and springs and good infrastructural resources, it is possible to create local livelihood opportunities with a focus on food security and increasing incomes from agriculture, trees and grasses, animal husbandry, horticulture and micro-enterprises. Alienation of the local communities, however, is a major constraint and incentives have to be created for them to manage water and forest resources. This will require policy, legal and institutional reforms so that people have a sense of ownership of local natural resources and first usufruct rights to them.

Follow-up: Participatory village level action plans have been prepared by watershed communities. CPWD and three POs have begun promoting systems of crop intensification among them to enhance farm production and food security. This motivated 1000 farmers from the watershed villages to adopt SRI in 2008 to enhance their farm production.

I.1. E Other Activities

RTHD: Between 2002 and 2006, CPWD implemented the “Resolving the Himalayan Dilemma” (RTHD) programme with the financial support of Sir Ratan Tata Trust (SRTT). Eleven watershed development projects were undertaken with local POs to help the communities to meet their basic needs through participatory processes, with field support and monitoring by CPWD.



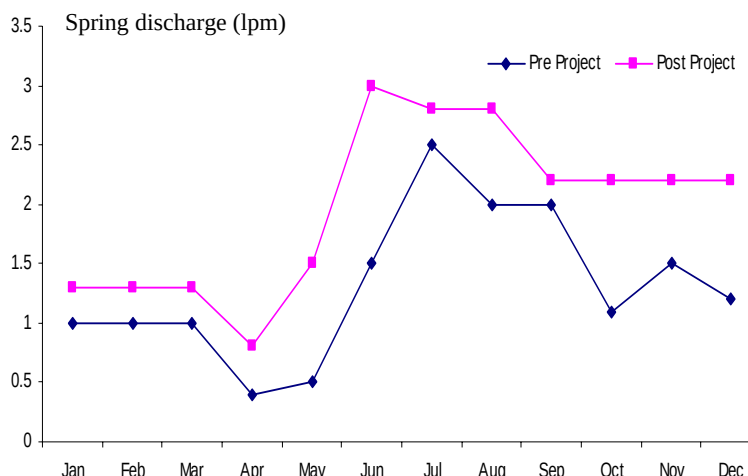
In 2008-09 CPWD teams provided field support to batch three POs, i.e., Manav Vikas Samiti (MVS, Bilaspur, H.P.), Social Awareness Through Human Involvement (SATHI, Thakur Dwara, Sirmour, H.P.) and Garhwal Vikas Kendra (GVK, Nainbagh, Tehri Garhwal, Uttarakhand) for completing the watershed development activities through strengthening of various village level institutions. This was done through a Small Grants Programme from SRTT.

Training: The Centre generated a total of 1961 trainee-days under watershed development, livelihoods promotion and micro-level planning programmes in 2008-09. Representatives of community based organizations (WCs, VDCs, SHGs, UGs and MMDs), Panchayat Pradhans and WDT members along with Watershed Development Coordinators (WDCs) of the Mid-



Himalaya Watershed Development Project, and BDOs from Kangra, Bilaspur, Una, Shimla and Sirmour districts of H.P were trained during the year.

Regenerating Springs Flows: PSI initiated studies on the impact of its catchment area treatment activities on spring discharges in four watersheds of H.P. and Uttarakhand where it and its partners had implemented the RTHD watershed projects. Results show increased stream discharges after catchment area treatment. The figure alongside shows the impact in the Silh Nala watershed in Bilaspur district, Himachal Pradesh.



I.2 REMARKS

PSI has been able to combine innovative research with statewide extension of the SCI methods in Himachal Pradesh and Uttarakhand. It is now a nationally recognized leader in the field. Mr. Debashish Sen, Director, CPWD is a member of a national level committee for promotion of SRI and SDTT's (Advisory) Committee on SRI. Earlier in 2007 a research paper presented by PSI had received an award at the Second National Symposium on SRI held at Agartala in November 2007.⁸

A major goal of the SCI programme, i.e., making SCI a government-sponsored statewide programme has been achieved. The challenge now is: what next? In FY'10 PSI will attempt to increase the SCI cultivated area per farmer so that the participating families can produce enough grains for meeting food security needs. In addition, new concepts of direct seeding, line seeding and promotion of SCI in unirrigated fields to meet drought situations will also be attempted along with trying out the technique with new crops like maize.

In its Challenge Programme project, "Resource Management for Sustainable Livelihoods" PSI evolved a participatory approach to poverty measurement, defining a Perceived Poverty Line in the process. In the "Sustainable Mountain Livelihoods" project it innovated a participatory micro-planning approach and identified the needs and potential of each and every family in a village. Its training programmes have extended these innovative methods to several partner organizations. CPWD now has work partnerships with over 50 VOs through its various programmes in Uttarakhand and Himachal Pradesh. PSI is thus seen as a leader in the VO community. Official recognition has also come in the form of its selection as a TSI (Training and Support Institution) by the Planning Commission of India.

Plan preparation work in the "Sustainable Mountain Livelihoods" project was completed in 2008-09. This project presents new challenges in trying to combine non-

⁸ D.Sen, S.K. Tomar, H.L. Bharati & R. Sharma: "Upscaling SRI in the Mountain States of Uttarakhand and Himachal Pradesh".



government funding with government funding at the Panchayat level. Most of the latter are being sourced from NREGA funds. This will enable PSI and its partners to play a significant role in the implementation of the NERGA scheme in Himachal Pradesh and Uttarakhand.

CPWD is the largest group in PSI. It brings in around two-thirds of the Institute's income and employs about two-thirds of its staff. As pressure mounts on it for expanding its activities and services, a major challenge before it is the recruitment of qualified, capable, articulate and creative people who can take on lead the widespread programmes. CPWD is playing a significant role in PSI's attempts to be more self-reliant by attracting significant funds for its training and development support functions. Though the quantum under this head declined in FY'09 over the previous year, due to the transfer of responsibility to a new training coordinator, in FY'10 and more so FY'11 this income should increase significantly.

I.3 FUNDING

S. No.	Project	Funding Partner	Income Rs.	Utilization Rs.	Balance Rs.	Remarks
1.	Upscaling SRI in Uttarakhand	SDTT ¹	43,25,000	42,27,575	97,425	--
2.	Promoting SCI in Uttarakhand	SDTT ¹	-	2,26,399	-2,26,399	Grant received in FY'10
3.	Promoting SWI in Uttarakhand	SDTT ¹	6,56,000	3,99,971	2,56,029	--
4.	Promoting SRI in Uttarakhand	AD, GoU ²	12,64,720	29,99,000	-17,34,280	Balance due
5.	Promoting SRI in Himachal Pradesh	WWF-ICRISAT ³	19,95,882	19,96,659	-777	--
6.	Promoting SWI in Himachal Pradesh	WWF-ICRISAT ³	4,01,700	3,98,792	2,908	--
7.	Upscaling SRI in Himachal Pradesh	WWF-ICRISAT ³	-	52,269	-52,269	Grant received in FY'10
8.	Sustaining Mountain Livelihoods	SRTT ⁴	45,91,000	45,95,372	-4,372	--
9.	DPP/CDAP preparation	GoU	9,50,000	10,42,528	-92,528	Installment received in FY-'10
10.	Development Support to Batch III POs	SRTT ⁴	2,99,000	3,10,916	-11,916	--
11.	Resource Management for Sustainable Livelihoods	IWMI, Sri Lanka ⁵	4,15,587	2,52,004	1,63,583	--
12.	Training & Development Support	Various Agencies	13,55,042	12,16,962	1,38,080	--
		Total	1,62,53,931	1,77,18,447	-14,64,516	

Notes: 1. Sir Dorabji Tata Trust, 2. Agriculture Directorate, Government of Uttarakhand, 3. World Wide Fund for Nature (India), 4. Sir Ratan Tata Trust, 5. International Water Management Institute, Sri Lanka

II. DISASTER MITIGATION AND RESPONSE

Disaster mitigation and response activities at PSI are conducted through the Centre for Disaster Mitigation and Response (CDMR). Its goal is to prepare communities for disaster risk reduction and response (DRR&R). In 2008-09 CDMR ended a five-year programme to prepare village communities in Uttarakhand for DRR&R. It completed the work begun in Uri district (Jammu & Kashmir) as a response to the Kashmir earthquake of October 2005. The Centre also supported a modest relief effort after the massive floods (August 2008) in Bihar's Kosi basin.

II.1 ACTIVITIES

II.1.A Disaster Preparedness and Response in North India

The winding up of this programme was strategically planned in the form of (i) completing residual programme activities, (ii) strengthening VOs in Uttarakhand to undertake DRR&R activities and (iii) carrying out process documentation. These activities included:

- Training 45 masons in EQ-safe construction techniques at three workshops.
- Assessing the quality of houses built by masons trained in the previous year.
- Conducting seven experience-sharing workshops with 155 masons trained earlier.
- Publication of सुचेतना newsletter.
- A follow-up workshop on Search, Rescue and First Aid response for partner organizations in Uttarakhand.
- A state-level consultation in Dehra Doon to synergize government and non-government action for DRR&R.



The process documentation exercise highlighted the variety, nature and extent of activities carried out during the programme to enhance the state of disaster preparedness in Uttarakhand and to disseminate that experience elsewhere in North India. These are summarized below.

CBDP: In recent years there has been an expanding discourse on community-based disaster preparedness (CBDP) in India and abroad. The practice of this concept, however, is limited. CDMR implemented a pilot CBDP programme in 53 villages of Rudrapur district in Uttarakhand. Its main elements were:

- Establishment of Task Forces (TFs) in each village and training them in various aspects of disaster management.



- Participatory disaster management planning in each selected village, including hazards mapping.
- Educating villagers on earthquake-safe house construction using various IEC materials.
- Raising awareness of gender aspects.
- Sustaining preparedness through wall writings, mock drills and observation of an annual disaster preparedness week.
- Stock piling of emergency supplies at a local resource centre.

Masons Training: A total of 425 masons were trained through five or six days workshops that focused on techniques of constructing EQ-safe load-bearing and framed structures, retrofitting of existing structures using a variety of training techniques and materials, including practical exercises. A specially designed shaking table and a film based on its use were particularly effective. Annual impact assessment of the training imparted was done by inspecting houses built by masons trained in the previous year. These assessments not only helped improve the contents of the subsequent training workshops but also resulted in a very significant increase in the proportion of EQ-safe houses built by the trained masons. Continuing interactions with them through the formation of a masons' guild, regular one-day follow up workshops and reporting innovative construction by them in **सुचेतना** helped enhance their capabilities and self-esteem.

Support Functions: A variety of activities were undertaken at a wider level to enhance the state of preparedness. These included:

- Creating a pool of disaster response professionals including doctors, engineers, social and health workers, scientists and administrators.
- Compilation of a state-level resource directory of such professionals.
- Preparation of IEC materials including posters, publications, films, calendars, local resource directories etc. and distributing them in the operational villages.
- Conducting regional level disaster preparedness workshops in north India.
- Policy research and advocacy.

A major issue emerging from the impact assessment is the fact that there is an absence of a culture of security or prevention of disasters. Thus in the absence of disasters people and communities are generally disinterested in participating seriously in preparedness activities. It is therefore difficult to sustain a state of preparedness at the community level. It is equally difficult to create self-sustaining small teams, e.g., Task Forces dedicated to maintaining a state of preparedness in their communities. This highlights the need for continuing external interventions.

II.1.B. Kashmir Earthquake Response

In June 2008 CDMR completed its Kashmir Earthquake Response project supported by the International Service Society (ISS) and the Sadanand Trust. Volunteers from the Kashmir

Earthquake Relief and Rehabilitation Coordination Committee (KERRCC) provided local field support. The main activities undertaken were:

- Construction of temporary shelters, featuring a new design with insulated walls immediately after the earthquake. A simple manual on temporary shelters in Urdu was prepared and distributed.
- 126 masons were trained at 10 workshops in affected villages of Uri tehsil.⁹
- New posters sets in Urdu, specifically designed for local architectural styles and shelter needs, on EQ-safe house construction were prepared and widely distributed.
- With financial support from ISS, CDMR helped 30 poor families build EQ-safe houses in Uri tehsil.
- Technical support for housing construction was provided to Aga Khan Foundation and the Confederation of Voluntary Associations.



II.1.C Bihar Flood Relief

On August 18, 2008 the eastern Kosi embankment breached at Kusaha (Nepal) causing a major disaster in India and Nepal. It affected nearly 4 million people -- 500,000 in Nepal and 3,500,000 in India. Less than 100 human lives were lost but there was major damage to about 40,000 ha of agricultural land and other property.

With financial support from ISS, CDMR assisted its field partner Nav Jagriti to provide relief to 500 families in five villages of Madhepura district. The relief supplies included food rations, utensils, household items, blankets, mosquito nets, mats and a tarpaulin sheet.

After the relief activities were over CDMR designed a DRR project for the Kosi basin with help of Dr. D.K. Mishra and Mr. A.K. Roy, both members of the Institute's Governing Body. The project will involve conducting an analysis of the vulnerability of the Kosi embankments and a GIS-based inundation analysis of the basin. The latter will help identify safe locations for temporary shelters by analyzing different flood scenarios.

II.2 REMARKS

The CBDP activities in Rudraprayag districts have added to PSI's already considerable experience and expertise in disaster mitigation and response. But as the programme impact assessment study has revealed, disaster preparedness is easier said than done. In the absence of a culture of security consciousness, sustaining a state of preparedness, requires continuing

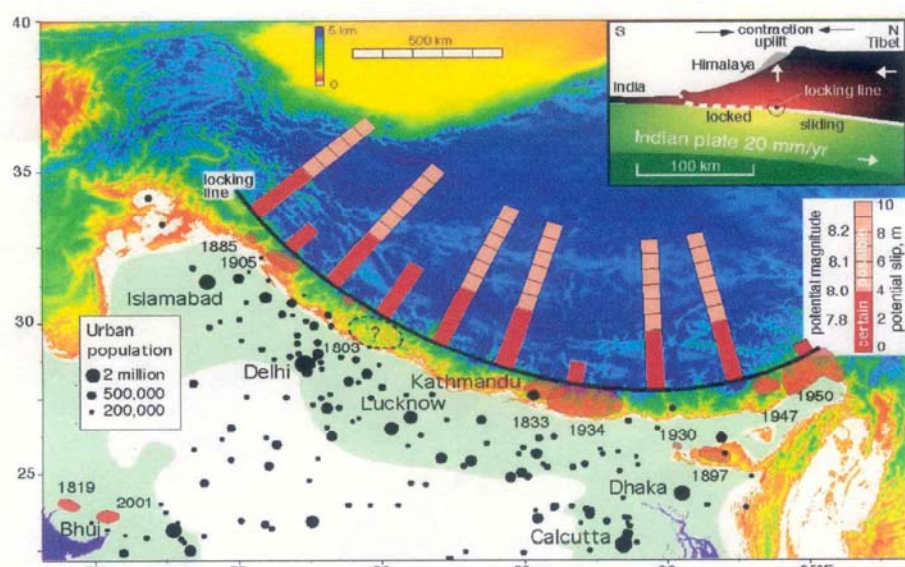
⁹ Four workshops for training 50 masons were sponsored by the Aga Khan Development Network

external intervention and support. In a sense, community-based systems also require carrying out repair and maintenance in a manner similar to that of built structures. PSI needs to consider sustaining such a programme in the future.

The completion of several disaster response projects in 2008-09 also signals a phase of reduced activities for CDMR. Disaster risks are likely to increase in the future according to the emerging climate change scenarios. CDMR will have to study the likely challenges and prepare to help threatened communities to respond to them. Availability of funding support for such studies appears to be limited at present.

II.3 FUNDING

S. No.	Project	Funding Partner	Opening Balance Rs	Income Rs	Funds Utilized Rs	Balance Rs
1	Disaster Preparedness & Response in North India	Oxfam (India) Trust	346,650	733,500	10,85,486	(5,336)
2	Kashmir EQ Response	Sadanand Trust/ ISS	645,429	--	579,221	66,208
3	Bihar Flood Relief	ISS	--	1,208,137	1,002,544	205,593
4	Bihar Floods Mitigation	Donations	--	153,950	14,319	139,631
5	Consultancy	World Vision	--	24,542	24,542	0
6	Masons' Guild	Membership	11,800	--	--	11,800
		Total	1,003,879	2,120,129	2,706,112	417,896



Source: "Himalayan Seismic Hazard", By Roger Bilham, Vinod Gaur & Peter Molnar, *Science*, 293, 1442-4, 2001, Science Magazine Download

III. ENVIRONMENTAL QUALITY MONITORING

The Environmental Quality Monitoring Group (EQMG) at PSI monitors environmental pollution and its impact and builds the capacities of VOs and communities to gather and interpret pollution data and plan for mitigating pollution related problems. It also assesses the environmental impact of development projects. It operates a well equipped laboratory in Dehra Doon.

In 2008-09 EQMG's activities centered primarily on providing technical support services to WaterAid India (WAI), the Indian arm of WaterAid International, along with a number of other small public interest projects and activities.

III.1 ACTIVITIES

III.1.A Technical Support to WAI

During the year under review EQMG continued its support to the WAI's partners in 9 states -- Uttar Pradesh, Madhya Pradesh, Jharkhand, Bihar, Chattisgarh, Orissa, Karnataka, Tamil Nadu and Andhra Pradesh. It conducted seven training workshops, analyzed WQ data submitted by the partner VOs and followed it by refresher workshops to resolve common errors and discuss treatment options. The water quality data thus gathered has been mapped on a web-accessible GIS platform (See also Innovative Projects section).

Other significant activities conducted under the WAI partnership are described below.

Household Based Water Treatment Demonstrations

Extensive WQ monitoring done in previous years with WAI partners had identified several areas that faced serious water contamination problems. At WAI's request EQMG



conducted on-site demonstrations of simple low-cost treatment methods in 12 problem villages of Orissa and Madhya Pradesh. Field reports had shown that a majority of the villagers were severely affected by the drinking water quality problems.

Village level meetings and health surveys were carried out to get baseline data of the prevalent water borne diseases. The health survey of 306 households in all the 12 villages revealed that over 40% of them were affected by water borne diseases like diarrhea, dysentery, typhoid, cholera and jaundice. Sodium hypochlorite bottles were distributed to 477 households. In addition Terafil domestic filters were installed in 20 households in Orissa and Ceramic candle filters were installed in 39 households in MP for demonstration purposes.

Fluorosis Monitoring and Mitigation Support

Fluoride monitoring and mitigation support activities were carried out in Dhar (MP), Warangal (Andhra Pradesh) and Khurda (Orissa) districts. Dental and skeletal fluorosis surveys were conducted in selected villages. Fluoride concentrations of drinking water sources were also measured. The data are shown below.



District	Sources Monitored	Fluoride Conc. mg/l	Dental Fluorosis (Children)	Skeletal Fluorosis	Remarks
Dhar	109	0.18-11.6	42%	ND	1300 children examined; 28% handpumps & 100% tubewells unsafe.
Khurda	22	0.1-12.8	89%	57%	Fluoride content >1.5mg/l in all drinking water sources of 3 out of 6 selected villages.
Warangal	26	0.34-3.07	59%	Present	Fluoride content >1.5mg/l in all drinking water sources in one village

These data were shared with the village communities and measures to access safe drinking water were discussed. In Dhar a complete ban on tubewells and hand pumps was recommended and obtaining safe drinking water from nearby available surface water sources was preferred. Villagers in Khurda proposed to upgrade shallow wells, having low fluoride concentrations, construct a sump well in the bed of a pond and install new hand pumps in areas with low fluoride content. In Warangal district the communities proposed to switch to safe drinking water sources containing less than 1.0mg/l fluoride concentration. They also considered the use of community based reverse osmosis plants, household and community based activated alumina filters, rainwater harvesting and defluoridation by the Nalgonda technique as other desirable options.

Arsenic Monitoring and Mitigation Pilot

EQMG undertook arsenic testing and mitigation planning in two villages (Dihari and Hajipur Bheeta) of Sahibganj district in Jharkhand in February, 2008. The study involved collection of water samples from drinking water sources for analysis of arsenic, a health survey on the impact of arsenic toxicity, water resource mapping and meetings with villagers.

The concentration of arsenic in 35 drinking water sources monitored varied between 0.014 - 0.103 mg/l in both the villages. All drinking water sources had arsenic concentrations higher than the BIS limit of 0.010 mg /l. Almost a quarter of all the individuals examined had symptoms of arsenicosis like skin lesions; melanesia – mild, moderate and severe; keratosis – mild moderate and severe. There is a need to provide proper medical help to the affected villagers. Shallow wells with lower arsenic concentrations can be an option for drinking water. Education campaigns need to be conducted to create awareness of the health impact of high levels of arsenic contamination.

(a) Workshop on Rural Water Quality Management

A 4-day workshop was organized by PSI in collaboration with WAI in February 2009 primarily to conceptualize an action plan for drinking water quality management in WAI supported areas. It also provided a platform for government officials, VO's and private agencies to share experiences and views on drinking water availability and quality issues.

The WaterAid action plan will focus on mitigation of fluorosis, arsenicosis and bacteriological contamination of drinking water. Model projects for fluorosis and arsenicosis mitigation, developed on the basis of previous work done by WAI partners and PSI, were adopted for implementation with the help of the respective state governments, WaterAid and its partners. Replication of these projects in other problems areas will also be attempted.

(b) Assessment of the National Rural Drinking Water Quality Monitoring and Surveillance programme

Under a separate consultancy from WAI, EQMG undertook a countrywide review of the National Rural Drinking Water Quality Monitoring and Surveillance programme initiated in 2006 by the Department of Drinking Water Supply, Ministry of Rural Development (GoI). Provision of safe drinking water and adequate water supply to every individual in rural areas has been taken up as a national mission by the Department. It emphasizes community involvement and the capacity building of stakeholders in maintaining safe water supply systems.

In 2008-09 the assessment covered 8 states -- Maharashtra, Gujarat, Rajasthan, Orissa, Karnataka, Tamil Nadu, Madhya Pradesh and Andhra Pradesh. The focus of the review is to study the strategies adopted by the implementing agencies in the different states and to examine the effectiveness of the programme.

The key activity components of the programme and their progress are shown in the table below.



No.	State	District Referral Lab	Field Testing Kits	Training of Officials	Panchayat Level Training	Institutional Collaboration	MIS	WQ Monitoring
1	Tamil Nadu	✓	ND	✓	✓	✓	ND	✓
2	Karnataka	✓	ND	✓	S	ND	ND	ND
3	Andhra	✓	S	✓	S	ND	ND	ND
4	Orissa	✓	ND	✓	S	ND	S	ND
5	M.P.	✓	S	✓	S	ND	ND	ND
6	Rajasthan	✓	✓	✓	ND	✓	S	ND
7	Gujarat	✓	✓	✓	✓	✓	ND	✓
8	Maharashtra	ND	S	✓	S	ND	ND	ND

Notes: ✓= Done, S=Activity Started, ND= Not Done

The table shows that most of the states are in various stages of establishing the different components of the programme structure. But the main action point, i.e., water quality monitoring has only been undertaken by Tamil Nadu and Gujarat. In Maharashtra the State Ground Water Board functions with a network of groundwater labs supported by the district level laboratories of PHED.



(c) Water quality monitoring in Delhi slums

EQMG tested the water quality of 12 drinking water sources in four slum colonies – Amar Park (Zakheera), Sudamapuri (Motinagar), Shivanand (Panjabi Bagh) and Vivekanand –II (Chankyapuri) in New Delhi at the request of Indcare, a Delhi-based VO involved in improving the living conditions of slum dwellers. It also conducted a training workshop on WQ monitoring and analysis of sanitation and hygiene condition in the slums for the Indcare staff and 20 slum dwellers.

All the four slums depend on handpumps, tubewells, and water tankers supplies for their drinking water needs. EQMG's testing showed that the groundwater in all the slums was saline. Water samples from Vivekanand-II and Amar Park colonies contained lead, cadmium and chromium. The latter two were present above the permissible standards as shown in the table below. Even the MCD tankers supplied water contained lead and cadmium. The samples from Sudamapuri and Shivanand colonies were uncontaminated by lead, cadmium and chromium.



Heavy metal content in drinking water samples from slums in New Delhi

No.	Sample Code	Sample Detail	Heavy metal content (mg/L)		
			Lead	Cadmium	Chromium
A		Amar Park (Zakheera)			
1	A-1	H.P. near peepal tree (Subash house)	0.017	BDL	BDL
2	A-2	H.P. near Babu Lal's house	0.021	0.01	BDL
3	A-3	H.P near Manu Chauhan's house	0.016	BDL	BDL
4	A-5	MCD supply water	BDL	BDL	BDL
3	SD-3	MCD Supply water	BDL	BDL	BDL
D		Vivekanand-II (Chankyapuri)			
1	V-1	Tanker water Supply	0.023	0.051	BDL
2	V-2	Tube well in front of Disha office	0.023	0.041	BDL
3	V-3	Tube well, behind Sulabh complex	0.025	BDL	5.00
		Standard*	0.05	0.01	0.05

BDL – Below Detectable Limited, HP- hand pump, MCD –Municipal Corporation Delhi, *IS-10500:1991, BIS New Delhi

(d) Other Activities

Drinking Water Samples Analysis: EQMG operates a state of the art laboratory in Dehra Doon. It is equipped with sophisticated instruments like atomic absorption spectrophotometer (AAS), gas chromatograph, respirable air and gas sampler, flame photometer, spectrophotometer and a TKN assembly. It undertakes testing of drinking water samples on request from citizen's groups, VO's and government agencies. In 2008–09, over 200 drinking water samples were tested by the EQMG lab. These samples came from the SWAJAL programme and institutions like Lal Bahadur Shastri National Academy of Administration, Doon School and Woodstock among others.

Sale of Water Testing Kits: EQMG produces two types of water testing kits, viz, comprehensive and domestic. In 2008–09, it sold 57 kits, out of which 46 were purchased by WAI partner organizations. Ninety refills of kits were also sold during the year.

Technical Support to Banwasi Sewa Ashram: At the request of Banwasi Sewa Ashram EQMG provided technical assistance to it for monitoring environmental quality in the Singrauli region. Banwasi Seva Ashram is a reputed VO in eastern UP. It has been funded by the Central Pollution Control Board (CPCB) to carry out environmental quality monitoring of Singrauli region which is located near 13 coal mines and thermal power stations which generate 14000 MW of electricity. This area has been declared as a problem area by CPCB. EQMG is providing technical support to BSA in carrying out ambient air quality (heavy metals), groundwater and

surface water quality monitoring and in studying the impact of environmental pollution caused by the coal mines and thermal power stations on vegetation and human health.

III.2 REMARKS

For many years EQMG has been faced with the problem of financial sustainability. This problem has been tackled to a large extent by entering into a multi-year agreement to provide technical support services to WaterAid (India). Requests for its testing services have led to significant use of the laboratory equipment, though most of the requests are for water quality testing. Consequently work on air quality testing is quite minimal.

In 2008-09 Mr. Ayan Biswas, a senior research scientist with EQMG, left for Holland on a study leave. With the accompanying increase in activity the Group has faced a tremendous pressure of work on its current staff. Efforts are being made to find suitable personnel

III.3 FUNDING

S. No.	Project	Funding Partner	Opening Balance Rs	Income Rs	Funds Utilized Rs	Balance Rs
1	Technical support to WAI	WAI	414,303	1,928,206	2,325,219	17,290
2	Revenue	-	-	466,954	466,954	0
	Total		414,303	2,395,160	2,792,173	17,290



IV. INNOVATIVE PROJECTS

VI. I. ACTIVITIES

IV. I A. Promoting SRI Dhan in western Orissa

The Azim Premji Foundation extended financial support to PSI to propagate the System of Rice Intensification (SRI) among farmers in three districts, Nuapada, Kalahandi and Bargarh, of western Orissa.

In April 2008 more than 200 village meetings were conducted in the selected districts to encourage farmers to practice SRI. About 70 master trainers were trained who in turn trained 2492 farmers in the SRI method.

Eventually, however, only 1093 farmers completed the exercise over an area of 210 ha. A relatively poor monsoon, particularly rainfall failure in the initial monsoon months of June and July 2008, led to inadequate irrigation which compelled a majority of the registered farmers to give up the experiment.

The 1093 farmers who finally adopted the SRI method turned in very impressive results. Crop-cutting exercises done in 87 sample fields in Nuapada and Bargarh revealed an average productivity of almost 5.0 tons per ha. Comparative analysis of the crop-cutting exercises in 22 fields sampled showed that the SRI yields were about 3.5 times (350%) greater than the average yield of the traditional method. The impact of the poor rainfall was most visible in Kalahandi district where crop-cutting exercises on 75 farms gave an average yield of only 3.06 tons/ha. This was, however, still more than twice the yield of the traditional method.



Based on the average productivity per district and the area under SRI in each district, it is estimated that the 1093 farmers produced 929 tons of rice, worth about Rs. 83,61,000 at the prevailing market prices. On an average, the gross value of the crop per farmer is Rs.7650.

IV.1 B. Participatory Preparation of District Perspective Plan (Nuapada, Orissa)

Based on the recommendation of the Planning Commission, the Government of Orissa invited PSI to prepare a District Perspective Plan (DPP) for Nuapada district. The project started in June 2008 and the time allotted was only four months. The work was executed by five teams (one for each block) which visited each Gram Sabha and conducted meetings. The aspirations of people were recorded in a pre-designed format. A computerized data-base was prepared. The



plans were first compiled at the block level and then at the district level. Simultaneously work was started on the preparation of a District Vision document. Secondary data were collected from various departments. A District Vision document was prepared which was discussed with various stakeholders, including elected representatives from the district.

In September 2008 the District Vision 2020 and the Comprehensive District Agriculture Plan were presented to the District Planning Committee and approved by it. The Plan is now being implemented to fulfill the aspirations of the people. Elaborate micro-plans prepared in about 67 villages under PSI's Gram Swaraj Abhiyan, watershed plans in many villages and urban local bodies plans were collected and incorporated in the district perspective plan. Each project in a plan was allocated to a scheme and year-wise resource allocations were then made. The final District Perspective Plan along with NREGA and BRGF plans were submitted in December 2008.

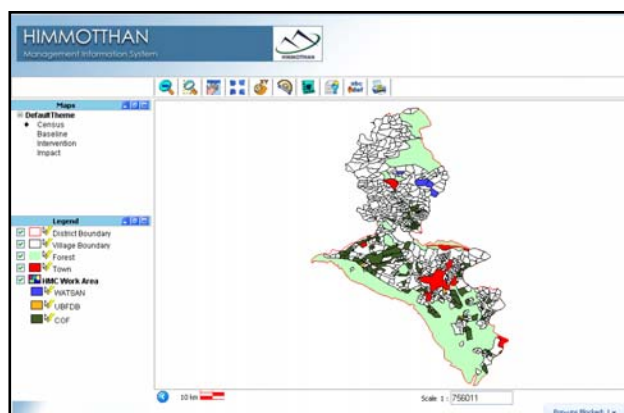
IV.1.C. VIS & MIS

VIS: PSI has developed a web-based Village Information System (VIS) GIS platform which provides detailed information on every village, district and state. It displays data of about 175 parameters pertaining to demography, social welfare, infrastructure and land use from the 1991 and 2001 census. It was formally launched 2007. Initially VIS was developed for the state of Uttarakhand.

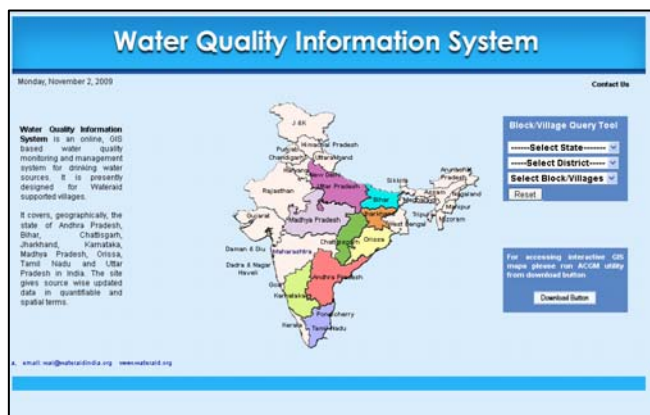
During 2008-09 Haryana and Himachal Pradesh databases were added to the VIS platform. Based on the feedback from some users the home page and the search query were redesigned to make them more user friendly. The bandwidth of PSI's leased line connection has now been increased from 128 kbps to 516 kbps and a new utility ACGM has been included to reduce accessibility time from about 45 seconds to about 15 seconds. The hits on the site are monitored on a weekly basis. The site averages about 200 hits / week. Measures to popularize the site are being taken.

MIS: The GIS-lab also began two projects to prepare on-line Management Information Systems (MIS) for SRTT's Himotthan Pariyojana projects and the water quality data provided by the partners of WaterAid India. These systems enable quick analysis of spatial and non-spatial data.

Standardized baseline and intervention data structures were designed for all Himmotthan projects' villages. Lists and baseline data of all the villages were collected from Himmotthan's POs and linked to the VIS maps. The new maps were then published on PSI's web server. An online financial management for the new Integrated Fodder and Livestock Development Project was also developed. An exclusive website www.villageinformationsyssem.org/himmotthanmis was created to webload the entire system.



The WaterAid MIS provides updated water quality data for each water source monitored by WaterAid partners. . It visually identifies sources which are safe for drinking. It also identifies areas where sources have unsafe values for the selected parameter. Geo-referenced maps for all the blocks in which Partner Organisations of Water Aid are working



were prepared by on screen manual digitization. PSI procured lists of villages for all the districts spread over nine states from different WAI partners across India and identified them on the geo-referenced maps. The locations of water sources were recorded by the POs using GPS. These locations were also identified on the map. A database for water quality of all the sources was prepared and linked to the map and published on PSI's server. A website

www.villageinformationsystem.org/wateraid was developed to create accessibility. A customized system was developed for online accession of updated data for each water source. The entire system was tested with real time data. It was formally launched by Mr. Rajendra Singh, known as the "Waterman of India" on April 09, 2008 at a national workshop. "Conference of safe drinking water -- Safe drinking water in rural area: community based approaches".

IV.3 FUNDING

S. No.	Project	Funding Partner	Opening Balance	Income	Funds Utilized	Balance
1	Promoting SRI Dhan in western Orissa	Azim Premji Foundation	-	10,00,000.00	9,70,895	29,105
2	District Perspective Plan Preparation	Go Orissa	-	6,40,000.00	4,92,000.00	1,48,000
3	Development of Management Information System for Himmothan	Himmothan Cell	(56,280)	401,000	383,135	(38,415)
4	GSA	SRTT	18,700	173,000	192,935	(1,235)
5	Revenue		79,867	360,868	511,526	(70,791)
		Total	42,287	2,574,868	2,550,491	66,664



V. RIVER CONSERVATION

A significant development at PSI in 2008-09 was the initiation of a new Rivers Conservation Group. This is meant to be a team that is dedicated solely to the task of aiding efforts to conserve rivers in India. Its rationale and activities are explained in this section.

Uttarakhand is being promoted as 'Urja Pradesh'. The GoU looks upon hydropower development as a major source of revenue while the GoI looks upon it as a national resource. A programme has been launched to build hundreds of dams in the state. So far 290 dams of >5 MW capacity have been approved or are under various stages of construction. Most of them are diversion dams which divert river water into tunnels and drop them several kilometres downstream at power houses. Several dams in series on major rivers will convert them into a series of ponds (reservoirs) connected by pipes (tunnels). The intervening stretches between dams will remain dry much of the time, destroying river ecosystems. Even the Ganga river, India's most sacred and nationally revered river, has not been spared.

Not only are rivers and their ecosystems imperiled but the lives, livelihoods and culture of hundreds of villages along their banks are doomed to perish. Digging tunnels in the fragile Himalayan mountains has diverted underground flows leading to loss of water resources for villages and led to destabilization of slopes, land subsidence, landslides and erosion. Destruction of forests, loss of fish, acquisition of precious agricultural lands and displacement is depriving people of livelihoods. With the drying of long stretches of rivers local communities have lost access to them for worship and ritual purposes. For pilgrims and Ganga devotees, their right to worship has been affected.

While the glacier fed rivers are threatened by power projects, rivers fed by rain and underground seepages in Uttarakhand are drying up. Decades of deforestation have denuded river valleys of their tree cover. Rainwater runs off the denuded slopes leading to very little discharge in the rivers after the rainy season. Increasing demand for irrigation and domestic supplies has led to heavy extractions, further depleting the flow in the rivers. Increasing use generates more waste water and release of untreated sewage is polluting the rivers. Once again, even the sacred Ganga is not spared.

Aggrieved people in Uttarakhand and their supporters came together in 2007 under the banner of Uttarakhand Nadi Bachao Abhiyan (UNBA) to campaign for river conservation and a rational approach to sustainable hydropower development that is less injurious to their lives and the environment. A similar situation exists in most other Himalayan states and there are active campaigns against hydropower development programs in Himachal Pradesh, Sikkim, Assam, Arunachal Pradesh, Meghalaya and Manipur.

V.I. ACTIVITIES

V.I.A. Save the Rivers Campaigns



PSI has been a leader in conceptualizing UNBA and its campaign to protect the state's rivers. It has provided sustained support by undertaking research, analysis of scientific and technical issues and in creating an informed public opinion in favour of sustainable hydropower development. PSI's scientists have analyzed EIA reports and DPRs of specific hydropower projects on request from affected communities and strengthened their struggles by demystifying the reports' contents and improving their scientific and technological understanding.

Specifically in 2008-09, the Institute's staff have toured most of the important river valleys of the state to gain first hand knowledge of the ground realities. This has fed into a situational analysis of Uttarakhand's hydropower programme. To enhance their own understanding of the scientific and technological issues involved in river conservation, PSI's scientists have reviewed relevant scientific literature, undertaken field studies and interacted with leading experts in India and abroad. This has led to an informed and evidence-based advocacy with the public, opinion-makers and decision-makers from the village to the national level. Initial financial support for this work has been provided by India Friends Association (California).

V.I.B. Towards Rational Hydropower Development in Uttarakhand

The River Conservation Group began a documentation and research project with funding from WWF – India's Living Ganga Programme, in the last quarter of 2008-09. The project has three components.

- Documentation of the nature and extent of Uttarakhand's hydropower development programme and its environmental, social and cultural impacts.
- The Group will prepare a situation analysis report based on the above. It will also highlight alternatives to the state's current hydropower programme which less threatens the environment, peoples lives and their cultures.
- Dams and barrages obstruct the natural flow of rivers, robbing the downstream portion of adequate flow and sediments in the river. To understand the short-terms and long-term impacts of dams on river water quality, the EQM Group at PSI has analyzed water samples taken from the upstream and downstream side of three dams on the Bhagirathi Ganga. Similarly to determine the impact of dam construction activities, u/s and d/s samples have been taken from three under-construction sites, one on the Bhagirathi and two on the Alakananda river. Lean flow season sample analysis shows a comparative deterioration of water quality on the downstream side. A loss of biodiversity in the form of fewer benthic macro-invertebrate species and their populations has also been recorded on the downstream side.
- Environmental flow refers to a regime of flows, the amount of water and its variations, that is required to enable a river to perform all its functions. So far, the methods to determine environmental flow requirements of rivers have been developed largely in the western industrialized nations. These methods focus only on the ecological flow requirements. In India, however, rivers also play a rich cultural role. The River



Conservation Group is trying to develop a methodology to assess the flow requirements to sustain the cultural practices of dependant communities.

V.I.C. Enhancing Stream Discharges

With the help of funds from the International Service Society and India Friends Association, PSI has granted fellowships to enhance stream discharge by encouraging forest conservation and rainwater harvesting in micro-catchments using the springs sanctuary approach. Three fellowships were given in 2008-09.

V.I.D. Support to the Campaign to Save R. Ganga

Hurt by the threat posed to the very existence of River Ganga, in its only remaining pristine stretch from Gaumukh to Uttarkashi, by dams construction, Dr G. D. Agrawal, one of India's renowned environmental scientists, Chairman of PSI's Executive Board and a Ganga devotee, undertook two long fasts in June 2005 and Jan-Feb 2009 to force the governments of India and Uttarakhand to give up their dam-building plans in this stretch and allow the river to flow in its natural form. His former students, friends and well-wishers formed the Bhagirathi Bachao Sankalp to support his efforts.

PSI provided sustained support to Dr.Agrawal's protest. Its staff helped look after his well-being during the fasts. They helped mobilize support in India and abroad, disseminate information, undertake media outreach, organize meetings, support advocacy and negotiations at the highest levels of government. They were also engaged with analysis of flow data of Bhagirathi river at the Loharinag – Pala dam site.

Dr. Agrawal's sustained protest has led to the suspension of plans and construction of three dams in the pristine stretch. It has also helped persuade the GoI to recognize the special status of river Ganga and to begin efforts for its conservation. The GoI declared Ganga as India's National River in November 2008 and established the National Ganga River Basin Authority in February 2009. In September 2009, the GoI nominated Dr. Ravi Chopra, Director, PSI as a member of NGRBA.

V.2 REMARKS

PSI is establishing a niche for itself by its scientific analysis of flow requirements of river Ganga and its tributaries. Its River Conservation Group is also enhancing its own knowledge and understanding of rivers and their conservation.

At the recommendation of Dr. G. D. Agrawal, Dr. Ravi Chopra was made a special invitee to the High Level Experts Committee set up by India's Ministry of Power in July 2008 to determine the flow requirements to maintain the Bhagirathi river in a pristine form in all its stretches.

PSI's river conservation efforts are leading to slow but definite shifts in public discourse, official attitudes and practices of hydropower developers. There is now a developing concern for sustaining river flows. Government officials are being forced to discuss release of



environmental flows rather than minimum flows downstream of dams and barrages. Use of tunnel boring machines is beginning to replace destructive and crude blasting operations for digging tunnels. Uttarakhand's government is being forced to work on a rehabilitation and resettlement policy. PSI can justly claim to have contributed significantly to these shifts.

V.3. FUNDING

S.No.	Project	Funding Partner	Opening Balance	Receipts	Funds Utilized	Balance
1.	Save the Rivers Campaign	IFA	1,93,653	-	1,26,258	67,395
2.	Towards Rational Hydropower Dev.	WWF	-	2,50,000	98,473	1,51,527
3.	Rainwater Harvesting	ISS	-	6,44,708	96,000	5,48,708
4.	Save Ganga Campaign	EI	-	50,000	50,000	-
	Total		1,93,653	9,44,708	3,70,731	7,67,630

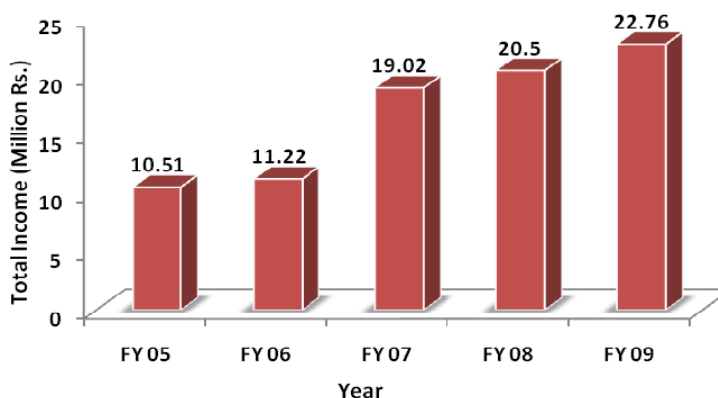
IFA: India Friends Association; ISS: International Service Society

EI: Envirotech Instruments Pvt. Ltd. WWF: World Wide Fund for Nature (India)

VI. FINANCIAL REPORT

PSI's balance sheet and consolidated income and expenditure account for 2008-09, ending March 31, 2009 are attached as Annexures 1a and 1b.

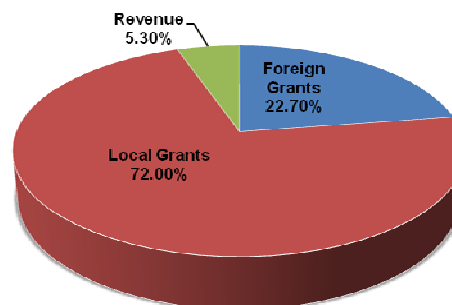
PSI began the year with a total opening balance of Rs. 9,847,751.01. During the year it generated total receipts of Rs. 22,792,467.42 and spent Rs. 26,755,331 leaving a closing balance of Rs. 5,884,887.43. Almost 81% of the expenditure was on project activities, 15.2% on administration and 3.8% was on purchase of fixed assets.



The figure alongside gives an indication of the Institute's ability to raise funds in recent years. After FY 07 growth in income has been maintained but at a slower pace.

The pie-chart shows the sourcing of income from local grants and donations, foreign grants and donations and revenues from the sale of goods and services.

The main donors for local and foreign grants are listed below. PSI is thankful to all of them for their support. Revenue income was earned from consultancies, training programmes, sales of publications, calendars, water quality testing kits and posters.



Major Funders

Indian

Sir Dorabji Tata Trust
Sir Ratan Tata Trust
WWF-ICRISAT
Azim Premiji Foundation
Governments of Uttarakhand & Orissa
DRDAs
NABARD
K.C. Shroff Foundation
Envirotech Instruments Pvt. Ltd.
CTC Geotechnical Pvt. Ltd.

Foreign

Water Aid India
Oxfam (India) Trust
International Water Management Institute, Sri Lanka
International Service Society
India Friends Association



EXECUTIVE BOARD 2008-09

Dr G.D.Agrawal	Chairperson	Environmental Scientist
Dr K.S.Chawla	Treasurer	Geotechnical Engineer
Dr B.K.Joshi	Hony. Dean	Political Scientist
Mr Abhay Bhushan	Member	Information Technologist
Ms Madhu Sarin	Member	Architect
Dr Leela Visaria	Member	Sociologist
Dr Ravi Chopra	Director (Ex-Officio)	Scientist

PSI STAFF 2008-09

S.No.	Name	Date of Joining	Date of Leaving in 2008-09
1	Ravi Chopra	01.02.1988	
2	Debashish Sen	01.03.1988	
3	Rajesh Kumar	01.04.1988	
4	C. Tripathi	15.06.1988	
5	Salil Das	21.02.1990	
6	Anthony Basil	09.10.1992	
7	Pushpa Juyal	21.12.1992	
8	R.S. Prasad	01.11.1994	
9	Dinesh Sharma	02.10.1997	
10	D.N. Dwivedy	17.08.1998	
11	Rajesh K. Sharma	20.08.1998	
12	Vikram Singh	01.02.2000	
13	Anil Kumar Gautam	01.03.2002	
14	Amita Sharma	01.04.2002	
15	Heera LAI	01.04.2002	
16	Subhash S. Rawat	01.05.2002	
17	Ajay Nautiyal	06.09.2002	30.09.2008
18	Anil Tyagi	01.12.2002	
19	Deepak Negi	04.04.2003	
20	Ayon Biswas	01.09.2003	(On study leave) 30.09.2008
21	Ramesh Singh Rawat	16.09.2004	
22	Ramesh C. Tirpathi	03.11.2004	
23	S.P. Chaturvedi	05.01.2005	30.06.2008



24	Rajendra Bansal	03.10.2005	
25	Sapna Bhardwaj	17.11.2005	31.07.2008
26	Manoj Kumar	10.07.2006	
27	AnilKumar	03.10.2006	
28	Ajay Kumar	01.11.2006	
29	Pavitra Singh	01.11.2006	
30	Nidhi Barthwal	08.03.2007	
31	Manauwar Ali	16.08.2007	30.09.2008
32	Mohit Kumar Singh	01.09.2007	31.01.2009
33	Menka Thakur	13.09.2007	
34	Priyanka Chowdhury	01.11.2007	14.08.2008
35	Subhash Chand Ramola	01.11.2007	31.05.2008
36	Subhashree Pradhan	03.12.2007	30.11.2008
37	Asha Gupta	01.01.2008	
38	Mahendra Singh Rajwar	01.01.2008	
39	Devjit Nandi	06.01.2008	30.11.2008
40	Saurindra Narayan Goswami	07.01.2008	
41	Alok Kumar Sah	11.02.2008	
42	Shiv Kumar	17.03.2008	
43	Jityendra Singh	24.03.2008	31.07.2008
44	Desh Raj	21.04.2008	
45	Ajay Jairwan	01.05.2008	
46	Shankar Datt	05.05.2008	
47	Niranjan Kumar	06.05.2008	31.07.2008
48	Pradeep Joshi	10.06.2008	31.08.2008
49	Saumya Singh	16.06.2008	31.12.2008
50	Vimal Pandey	01.07.2008	
51	Priya Shukla	07.07.2008	
52	Mabel D. Gergan	25.08.2008	
53	Bharat S.Puspan	01.09.2008	
54	Mitthan Lal	01.09.2008	
55	Pravin Kumar	01.09.2008	
56	Vijay Pal Singh	08.09.2008	
57	Chicu Lokgariwar	22.09.2008	
58	Devesh Semwal	01.11.2008	
59	Meena Yadav	07.11.2008	
60	Bhuwan Joshi	15.12.2008	
61	Pankaj Kumar	02.02.2009	
62	Vipin Kumar	02.02.2009	

PEOPLES' SCIENCE INST., UTE
E-57, PANCHSHEEL PARK
NEW DELHI- 110016

BALANCE SHEET AS AT 31st MARCH, 2009

S.NO.	PARTICULARS	SCHEDULE	FOREIGN GRANTS	LOCAL GRANTS	REVENUES	TOTAL AS AT 31.03.2009	TOTAL AS AT 31.03.2008
I	SOURCES OF FUNDS						
	A. ENDOWMENT FUND		597,837.00	-	-	597,837.00	597,837.00
	B. REVOLVING FUND		1,160,000.00	128,500.00	-	1,288,500.00	1,288,500.00
	C. CAMPUS FUND		4,889,603.00	1,212,000.00	-	6,101,603.00	5,069,603.00
	D. CAPITAL FUND						
	Opening Balance		776,451.81	1,710,751.48	83,636.30	2,570,839.59	3,099,980.28
	Add: Excess of Income over expenditure		(82,296.26)	336,952.86	869.00	255,525.60	(529,140.69)
	Closing Balance		694,155.55	2,047,704.34	84,505.30	2,826,365.19	2,570,839.59
	E. GRANTS (to the extent unutilised)		843,842.89	765,513.35	-	1,609,356.24	6,201,524.42
	TOTAL		8,185,438.44	4,153,717.69	84,505.30	12,423,661.43	15,728,304.01
II	APPLICATION OF FUNDS						
	F. FIXED ASSETS (at cost)	I	3,857,130.00	1,254,659.00	3,140.00	5,114,929.00	4,729,563.00
	less Depreciation						
	G. INVESTMENTS	II	3,400,000.00	-	-	3,400,000.00	9,200,000.00
	H. NET CURRENT ASSETS	III	966,880.44	3,394,689.69	98,148.30	4,459,718.43	1,881,968.01
	Current Assets, Loans & Advances		38,572.00	495,631.00	16,783.00	550,986.00	83,227.00
	Less: Current Liabilities & Provisions		928,308.44	2,899,058.69	81,365.30	3,908,732.43	1,798,741.01
	NOTES TO THE ACCOUNTS	IV					
	TOTAL		8,185,438.44	4,153,717.69	84,505.30	12,423,661.43	15,728,304.01

"As per our separate Report of even date attached herewith"

S.M. VARMA & CO.

Chartered Accountants

(NEW DELHI)

CHARTERED ACCOUNTANTS

Date: New Delhi

Place: New Delhi

2 SEP 2009

For **PEOPLES' SCIENCE INSTITUTE**

Ravi Chopra
RAVI CHOPRA
 Director

G.D. Agrawal
G.D. AGRAWAL
 President

Kanwarjit S. Chawla
KANWARJIT S. CHAWLA
 Board Member



PEOPLES' SCIENCE INSTITUTE

CONSOLIDATED INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD ENDED 31st MARCH, 2009

PARTICULARS	FC AMOUNT AS AT 31-3-2009	LG AMOUNT AS AT 31-3-2009	REVENUE AMOUNT AS AT 31-3-2009	TOTAL AMOUNT AS AT 31-3-2009	TOTAL AMOUNT AS AT 31-3-2008
INCOME					
REVENUE:-					
Grants Unutilised C/f	1,482,993.21	4,718,531.21	-	6,201,524.42	4,690,660.02
Bank Interest	26,334.00	56,235.00	1,144.00	83,713.00	65,499.00
Calendar's Receipts	-	-	115,239.00	115,239.00	349,820.00
Consultancy Receipts	-	-	445,040.00	445,040.00	324,926.00
Donations Received	-	611,903.00	-	611,903.00	58,600.00
Grants received	4,930,138.00	15,447,438.00	-	20,377,576.00	18,402,387.00
Miscellaneous Receipts	11,000.00	144,215.00	-	155,215.00	183,011.00
Publications, Posters & Maps Receipts	-	-	192,364.00	192,364.00	43,905.00
Return on Investments	208,932.42	116,152.00	-	325,084.42	484,997.91
Water Sampling Receipts	-	-	147,325.00	147,325.00	234,525.00
Water Testing Kits Receipts	-	-	254,887.00	254,887.00	361,570.00
Projects Closed	315,121.48	1,190,667.90	-	1,505,789.38	326,206.80
Overheads transferred to General Fund	162,413.00	594,638.00	-	757,071.00	94,178.00
TOTAL (A)	7,136,932.11	22,879,800.11	1,208,120.00	31,224,852.22	25,620,285.73
EXPENDITURE					
Advertisement Expenses	-	288,540.00	-	288,540.00	-
Audit Fee	22,472.00	22,472.00	-	44,944.00	58,427.00
Bank Charges	6,007.00	25,582.00	13,483.00	45,072.00	20,350.00
Board & Lodging	3,904.00	71,136.00	2,010.00	77,050.00	62,788.00
Books, Periodicals & Data CDs	2,120.00	39,988.00	-	42,108.00	36,802.00
Computer Consumables	30,964.00	97,187.00	1,125.00	129,276.00	80,144.00
Depreciation	133,171.00	579,895.00	-	713,066.00	855,907.00
EPF Contribution	94,489.00	277,519.00	629.00	372,637.00	299,200.00
Fellowships	96,000.00	-	21,449.00	117,449.00	248,000.00
General Expenses	-	3,061.00	-	3,061.00	10,800.00
Grants to Other Organisations	1,000,000.00	7,683,055.00	-	8,683,055.00	3,048,055.00



Ravi Gupta



PARTICULARS	FC AMOUNT AS AT 31-3-2009	LG AMOUNT AS AT 31-3-2009	REVENUE AMOUNT AS AT 31-3-2009	TOTAL AMOUNT AS AT 31-3-2009	TOTAL AMOUNT AS AT 31-3-2008
Honoraria/Consultancies	107,800.00	692,828.00	67,800.00	868,428.00	1,368,871.00
Hospitality Expenses	17,340.00	3,965.00	-	21,305.00	19,296.00
Insurance Charges	12,719.00	7,937.00	4,908.00	25,564.00	12,579.00
Laboratory Expenses	110,618.00	-	22,833.00	133,451.00	135,158.00
Local Conveyance	5,254.00	17,278.00	2,329.00	24,861.00	36,082.00
Meetings/Conferences/Workshops	266,287.00	679,555.00	33,209.00	979,051.00	309,050.00
Office Maintenance	19,238.00	82,960.00	33,174.00	135,372.00	61,168.00
Photography & Slides	4,425.00	4,333.00	280.00	9,038.00	10,931.00
Postage & Courier	28,799.00	29,443.00	70,634.00	128,876.00	84,395.00
Printing & Stationery	20,574.00	152,241.00	28,225.00	201,040.00	197,039.00
Professional Charges	-	18,604.00	-	18,604.00	45,933.00
Publications Expenses	158,000.00	245,750.00	57,720.00	461,470.00	427,248.00
Relief & Community Development Works	550,000.00	-	-	550,000.00	975,000.00
Rent	222,000.00	468,700.00	111,500.00	802,200.00	572,584.00
Repair & Maintenance	16,303.00	46,982.00	24,064.00	87,349.00	151,294.00
Research & Documentation	20,813.00	791,985.00	-	812,798.00	178,808.00
Salaries	1,717,377.00	4,372,710.00	433,469.00	6,523,556.00	4,879,937.00
Server & Website Expenses	188,051.00	148,315.00	0.00	336,366.00	301,773.20
Staff Welfare	11,675.00	39,252.00	7,344.00	58,271.00	64,316.00
Staff Medical Reimbursements	20,975.00	-	-	20,975.00	20,975.00
Staff Recruitment Expenses	2,310.00	21,028.00	1,000.00	24,338.00	40,956.00
Telephone & Fax	87,481.00	200,877.00	6,533.00	294,891.00	270,589.00
Training Expenses	57,409.00	942,284.00	-	999,693.00	1,469,080.00
Travelling	629,935.00	2,503,165.00	51,068.00	3,184,168.00	2,409,480.00
Vehicle Running & Maintenance	9,777.00	169,120.00	1,000.00	220,997.00	82,240.00
Water & Electricity Charges	54,064.00	19,970.00	19,970.00	112,297.00	90,752.00
Water Kiosk Production Expenses	-	-	23,375.00	23,375.00	68,056.00
Overheads Transferred to G F	-	-	-	757,071.00	94,178.00
Projects Closed	162,413.00	594,658.00	-	1,505,789.38	326,206.80
TOTAL (B)	315,121.48	1,190,667.90	-	29,839,447.38	19,424,446.00
Net Surplus (A-B)	6,224,402.48	22,407,793.90	1,207,251.00	1,385,404.84	6,195,839.73
Less : Grant Refunded	912,529.63	472,006.21	869.00	243,803.00	23,456.00
Unutilised Grants Carried Forward to Balance Sheet	50,983.00	194,820.00	-	1,609,356.24	6,201,524.42
Grant Receivable	843,842.89	765,513.35	-	1,725,280.00	-
Transferred to Campus Fund	-	1,725,280.00	-	1,000,000.00	500,000.00
Surplus transferred to Capital Fund	100,000.00	900,000.00	-	255,525.60	(529,140.69)

For PEOPLES' SCIENCE INSTITUTE



Date: 22 SEP 2009
Place: New Delhi

Ravi Chopra
Ravi Chopra
Director

G.D. Agrawal
G.D. Agrawal
President

Kanwarjit S. Chawla
Kanwarjit S. Chawla
Board Member