PEOPLE'S SCIENCE INSTITUTE

Dedicated To Nation-Building

I. INTRODUCTION

Beginnings Are Always Exciting

"India is a nation in the making," said the leaders of India's freedom struggle. They identified eradication of poverty as a key element of national reconstruction. But more than 65 years after independence, this remains an unfulfilled goal.

In 1988 a group of highly gifted IIT-educated professionals established People's Science Institute (PSI), an organization of professionals with a clear and practical vision of nation-building. Its stated mission is, "To help eradicate poverty through the empowerment of the poor and the productive, sustainable and equitable use of available human and natural resources." At PSI, poverty is understood in terms of shortages of human, social, natural, physical, and financial capital in communities.

PSI's activities are spread all over India. Its current geographical focus is on the Himalayan states and the poverty-ridden Bundelkhand region.

In almost 34 eventful years the Institute has become well-known in the voluntary sector for its pioneering work in the fields of community-led watershed development, environmental quality monitoring, fluorosis mitigation, disaster-safe housing, system of crop intensification, springs regeneration, participatory ground water management and river conservation.

PSI has established a special niche for itself by undertaking projects on a large scale by using a systems approach to scale-up community-centered projects from a village to a district-level, innovating social processes, administrative procedures and technologies. It is also recognized for its professional, knowledge-based approach from problem analysis to formulation of policy guidelines. The number of communities, voluntary organizations (VOs) working with them, research institutions, government agencies and occasionally donor organizations that seek the Institute's support or collaboration, continues to increase.

PSI has identified the likely developmental challenges and opportunities in the coming decades, in the context of India's rapidly altering political economy and the accompanying social changes. Its analysis shows that PSI's core strengths could provide a base for its response to many of these challenges. To help the nation meet them the Institute plans to expand its activities so that recent successful experiments in niche areas can be implemented on a large scale. For this it will have to focus on organizational development and add new capabilities.

II. ORGANIZATIONAL PROFILE

PSI's activities are grouped under four units: (i) Water Resources Management, (ii) Disaster Mitigation and Response, (iii) Environmental Quality Monitoring and (iv) Innovative Projects. The activities of the first three units are defined by the needs expressed by communities or the organizations working with them. The Innovative Projects Group experiments with critical concepts, processes and technologies to enable PSI to respond to emerging needs.

Each unit implements development projects, undertakes research and provides training as well as professional support. The Institute's approach to implementing development projects is a participatory one with empowerment of the underprivileged and self-reliance as key objectives. It can be outlined as:

- People identify a problem
- Together with PSI they analyze it
- Possible solutions are researched and the results discussed
- Local people are organized into village-level institutions
- They are trained to implement consensual development solutions
- PSI provides technical and managerial support during implementation
- Outcomes are periodically reviewed

***Water Resources Management*: The major challenge of water resources management at PSI is to enable communities to conserve, develop and manage their water resources to meet their livelihoods and household needs.** The Natural Resources Management (NRM) Group implements community-centered NRM projects and provides training and development support to other organizations engaged in participatory NRM activities. It also undertakes research in hydrology, water management traditions, water-related technologies and NRM policies.

The Sukha Mukti Abhiyan implemented by PSI's NRM Group in Palamau district between 1993 and 1996 attracted national attention. In a short span of about 30 months poor illiterate villagers were organized into village-level institutions – Pani Panchayats – and trained to **build 143 earthen dams to harvest rainwater for drought-proofing and securing livelihoods.**[1]

> "PSI's work in drought-proofing Palamau district is a unique model that needs to be emulated in the rest of the country."
>
> - *Shri Chandi Prasad Bhatt*
> *Chipko Leader*
>
> "I would like to cite the example of Palamau district in Bihar where Pani Panchayats have been set up to harvest water and manage watersheds. With the help of traditional structures and modern scientific inputs, a drought-prone area has witnessed remarkable change and is now set on the path of sustainable development."
>
> - *Prime Minister,*
> *Shri Atal Bihari Vajpayee.*

Under a mandate from CAPART the NRM Group provides training and development support to organizations implementing watershed development

[1] The program pioneered several technological, social and administrative innovations. Its guidelines and procedures helped the Ministry of Rural Development (MoRD), Government of India (GoI), to evolve its national watershed guidelines.

projects. It implements watershed development projects, has conducted a watershed development program of its own in Himachal Pradesh and Uttarakhand, provides program management support to government and donor agencies, undertakes research and documents its activities.

Between 2002 and 2006, PSI supported 14 VOs in Uttarakhand and Himachal Pradesh to undertake community-centered NRM projects on a watershed basis, over an area of about 7000 ha with the financial support of Sir Ratan Tata Trust.[2] The planned watershed activities have assured household water supply, raised agricultural incomes, increased fodder production and reduced soil erosion in the watershed villages.

PSI's services are sought by VOs and government agencies for implementing projects, research and training. District administrations in Himachal Pradesh regularly send community representatives to the Institute for training in watershed development. International agencies like Aga Khan Development Network-Afghanistan, International Water Management Institute-Nepal and Winrock International have also sought its support and collaboration.

In more recent years the NRM Group has led a **pioneering effort to introduce and extend the System of Crop Intensification (SCI) to a number of major crops** in various states of northern India. It has also evolved effective extension methods.

***Disaster Mitigation and Response*: The goal of disaster management at PSI is to prepare communities for disaster mitigation and to undertake preparedness and response activities.** The Institute's involvement in disasters began at its inception, during the severe drought of 1987-88.[3] Over the years PSI has intervened in a variety of disasters including droughts, floods, landslides, cyclones and earthquakes – Uttarkashi (1991), Latur (1993), Jabalpur (1997), Chamoli (1999), Gujarat (2001), tsunami (2004) and Kashmir (2005). The focus of these interventions has been on community-centred post-disaster relief, reconstruction and rehabilitation.[4] The goal is to help communities to rebuild their homes and livelihoods. The Institute is most well known for its training programs and

> "Of all NGOs' activities that have taken place after the relief effort I regard the training work done by PSI as the most meaningful one."
> ***Pravin Pardeshi, District Collector, Latur***
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> "These books are very useful to us. I am willing to buy one of these books even though I cannot read. With the help of the drawings I can show others how to build safe houses."
> *-Bhikubhai, Dwarka, Gujarat, on PSI's construction manual.*

[2] To facilitate its implementation in Uttarakhand, PSI negotiated an MOU with the Watershed Management Directorate of the Government of Uttaranchal for mutual support and cooperation.

[3] Between 1988 and 1992 it undertook research studies on the nature of droughts, the coping mechanisms of the poor, and traditions of water management, which laid a strong theoretical foundation for the later Sukha Mukti Abhiyan program in Palamau.

[4] Typically, the activities include initiating immediate relief operations, preparing and disseminating information and training materials in the local language on disaster-safe housing, training masons in disaster-safe construction techniques, helping the affected families to build temporary shelters and permanent homes and rehabilitating their livelihoods.

informative materials on EQ-safe housing construction, construction of temporary shelters to house the homeless immediately after disasters and earthquake-safe housing.

These experiences have enabled PSI to develop a comprehensive understanding of natural disasters and to help formulate policies and programs for disaster preparedness and management. The DM&R Group at PSI has also actively engaged with communities and VOs to prepare and respond professionally and effectively to natural disasters. **The NRM and DM&R Groups at PSI have joined hands to help disaster affected communities to revive their livelihoods.**

***Environmental Quality Monitoring*:** Environmental pollution seriously threatens human health and ecosystems in urban and rural areas of India. Monitoring environmental quality and generating quantitative data on pollution are necessary for sound environmental management. In 1991 **PSI established the Environmental Quality Monitoring (EQM) Group to: (1) Monitor environmental quality in the public interest; (2) Develop user-friendly monitoring techniques and (3) Build the capacities of voluntary organizations and citizens' groups to gather and interpret pollution data.**

PSI's EQM Group offers technical support to VOs, citizen's groups and government agencies working on environmental pollution problems. It operates a state-of-the-art laboratory equipped with sophisticated instruments like an atomic absorption spectrometer (AAS), gas chromatograph (GC), respirable air and gas sampler, flame photometer, spectrophotometer, TKN assembly, etc. A competent and dedicated team of scientists manages the lab.[5]

The EQM Group's research is largely focused on assessing the impact of environmental pollution and developing user-friendly pollution monitoring techniques. Its low-cost water quality testing kits are attracting an increasing clientele. Its report on groundwater contamination by mercury leaking from the Union Carbide plant in Bhopal was instrumental in ensuring the supply of safe drinking water to the affected communities. The Group has evolved a new community-based fluorosis mitigation approach in Sonebhadra district and is now seeking to replicate it in other parts of India.

Since rural domestic water supply and management is one of the functions of Gram Panchayats, the Group has begun to train them in monitoring their water quality. It also prepares communication materials to help communities understand environmental problems and formulate practical mitigation strategies.

Since 2010 the EQM Group has been implementing Participatory Ground Water Management primarily in Himalayan regions with the assistance of Arghyam and ACWADAM. **It has also trained people in different Himalayan states to use the principles of hydrogeology for reviving springs in mountain villages.**

[5] The team is guided in its work by a highly respected team of environmental scientists including Dr. R.H.Siddiqui, former Professor of Environmental Engineering at Aligarh Muslim University and Mr. A.K. Roy, Director, The Hazards Centre, New Delhi.

Developing Innovations: **Creativity is an important feature of PSI's work. Innovations at PSI involve research, development and diffusion of new community mobilization processes and technologies.**

PSI's Jal Sanskriti program[6] created a new understanding of the role of *sanskriti* (culture) in sustaining traditional water harvesting structures and systems. It has led to a renewed interest in the conservation of traditional water harvesting structures and their catchments and the diffusion of other appropriate technologies, e.g., deep infiltration wells, water sanctuaries and intermediate-size hydrams (designed by PSI) -- in Himachal Pradesh and Uttarakhand. The program has also generated a debate on the need to decentralize the ownership of water and other natural resources. Its *Jal Sanskriti* newsletter was a popular medium for disseminating information.

> "....the network of partners (at the Jal Sanskriti Workshop) assembled was broad....represent(ing) an impressive mix of civil society, highest level decision makers including the Uttaranchal Chief Minister and Chief Secretary, government officials, academicians, farmers, SHG members, etc.....
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> "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...the presentations were populated with data…..that were used to draw lessons, generate conclusions or at least indicate directions for follow up action and research. … "
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> - *Dr C.Scott, Director, IWMI, India Office*
> - *Arun Pandhi, Programs Manager, SRTT*

The Gram Swaraj Abhiyan was PSI's response to the starvation deaths in 2001 in Orissa. It is a program of self-reliant development based on community-led micro-planning.[7] Between 2002-06, 314 village development plans and 12 Panchayat plans (covering 108 villages) were formally ratified by their respective Palli Sabhas and Gram Sabhas.[8] The main outcomes so far include the establishment of hundreds of village-level institutions in the participating villages; over 200 village resource persons trained in engineering, health, pisciculture and rural marketing; *shramdan* for development works; regular functioning of schools and village visits by ANMs; successful anti-corruption campaigns and forest protection and maintenance of community assets. Among the various economic gains are sunflower and onion cultivation on 1000 acres yielding a net profit of Rs 13 million, and 49 women SHGs trading in mahua for a profit of Rs 4.5 lakhs. **At the request of the Union Ministry of Rural Development the Gram Swaraj Abhiyan was later extended to Bundelkhand.**

The technological innovations to PSI's credit so far include the construction of low cost earthquake-safe houses and temporary shelters, development of water quality monitoring kits, an intermediate-size hydram, a GIS-software program called Village Information System and the successful demonstration of the System of Rice Intensification.

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[6] It began in January 2000 with the financial assistance of The Ford Foundation.

[7] The central activity of this program is to prepare village and panchayat level development plans. The process motivates local communities to identify development projects, establish village-level institutions, volunteer labour (*shramdan*) and access government funds to implement their projects.

[8] The major problems identified include lack of social unity, low literacy, poor health services, lack of government services, poverty and degradation of natural resources.

Characterizing PSI's Work: The significant characteristics of PSI's work can be summarized as:

(1) **Impact on Scale:** Large-scale projects, e.g., Sukha Mukti Abhiyan or Gram Swraj Abhiyan are carried out relatively quickly and with limited human resources at PSI using a systems approach. It involves building the capabilities of local communities to handle much of the project implementation, empowering them in the process.

(2) **Innovation**: Innovating processes and technologies is the leading edge of PSI's work. The Institute has innovated social processes, technologies, administrative procedures and program guidelines.

(3) **Leadership:** PSI is a recognized leader in the fields of watershed development, earthquake-safe housing and environmental quality monitoring. It has developed new concepts and practices. Its emphasis on collaborative projects, particularly with small local VOs, has enabled several to grow into mature organizations.

(4) **Conceptual Clarity:** PSI's work focuses on enhancing productivity, sustainability and equity. Its approach emphasizes clarity of objectives, community empowerment, especially of women, self-reliance and transparent procedures to strengthen grassroots democracy.

(5) **Technical Skills:** The Institute has demonstrated its technical abilities from dam building to developing applications software. Equally important is its ability to demystify technology and make it a practical tool for the common people, e.g., training communities to monitor drinking water quality or to build earthquake-safe houses.

(6) **Research Capabilities:** Research at PSI spans a variety of subjects, from the design of EQ-safe rural houses, intermediate-sized hydrams, VIS, to studies on traditions of water management, traditional EQ-safe architecture and work patterns of women in the central-western Himalayas.

(7) **Training Forte:** The Institute is able to respond to the training needs of a wide variety of stakeholders in all its areas of interest.

(8) **Impacting Government:** PSI's guidelines and program management systems in the Sukha Mukti Abhiyan provided useful insights for the National Watershed Development Program of the MoRD (GoI). Its Gram Swaraj Abhiyan is being replicated by the official Orissa Tribal Empowerment & Livelihoods Program. PSI has been able to assist government agencies in Uttarakhand, Himachal Pradesh, Orissa, Jharkhand and Chattisgarh. Advocacy is an emerging strength as evident from its campaign for a people-oriented state water policy in Uttarakhand.

(9) **Recognition:** In 1996, CAPART selected PSI (one of seven institutions nationally) to be a training and development support organization in watershed development for the entire north India region from Jammu & Kashmir to Bihar. The HP state government has identified CPWD as a training center for participatory watershed development programs in that state. Dr Ravi Chopra, Director of PSI, has served on several central and state government committees, in recognition of the work done by the Institute.

The Institute's activities reflect depth, versatility and innovation. Yet there are areas where PSI needs to be strengthened significantly in order to take on future challenges. These include subject areas like economics, micro-finance, micro-enterprise development, forestry and ecological sciences and gender sensitization. All the disciplines at PSI need experienced project managers. Documentation and marketing capabilities also need to be strengthened.

Organization and Personnel

PSI is registered as a society (S/19082, dated June 27, 1988) under the Societies Act (1860). Donations to PSI are entitled to tax exemption under Section 80G of the Income Tax Act.

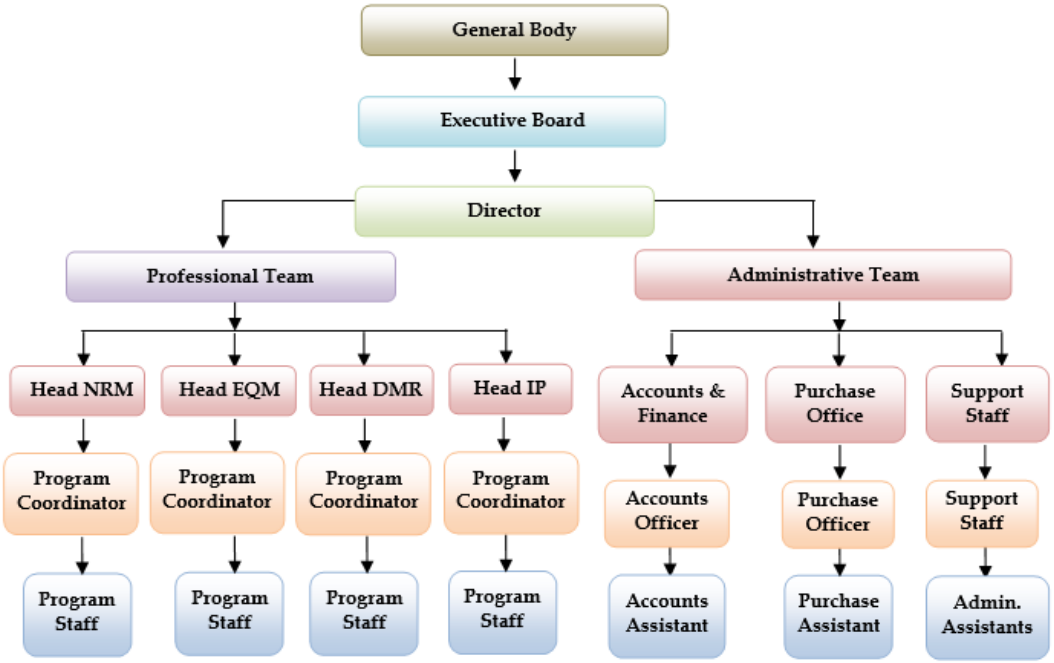
The Institute has a compact Executive Board of seven members. All the Board members are eminent persons in their chosen fields of endeavor. The present Board members are:

Prof. S. Prasad	Chairperson	IRMA, Anand
Prof. J. Andharia	Treasurer	Disaster Management, TISS
Dr. S. Sen	Member	Scientist (Hydrology), NIH-Roorkee
Dr. K. Metre	Member	Development Peripheral
Dr. H. Kulkarni	Member	Geologist
Dr. M. Chauhan	Member	Independent Scientist
Dr. D. Sen	Director (Ex-Officio)	Scientist

Dr. Sen is assisted by a highly experienced group of colleagues who lead different teams at the Institute:

Mr. P. Bartwal	Head, Natural Resources Management Group
Dr. Anil Gautam	Head, Environmental Quality Monitoring Group
Ms. Anita Sharma	Sr. Research Scientist, EQM Group
Ms. P. Juyal	Purchase Officer
Mr. Manoj Sharma	Incharge GIS Lab
Mr. Dinesh Sharma	Graphic Designer

PSI has its own eco-friendly campus building in Dehra Doon. It operates two state-of-the-art laboratories for Geographical Information Systems and Environmental Quality Monitoring. The Institute has a small library with over 3000 books. It subscribes to several professional journals and periodicals. The staff is adequately equipped with personal computers and the necessary applications software. PSI possesses the basic office equipment and training aids.



Finances

PSI raises funds for (i) its own activities, (ii) its partner organizations (POs) and (iii) communities that work with it to implement planned activities.[9] Its main sources of funds are grants -- Indian and foreign, from non-government donors and government agencies. It also attempts to be self-sustaining by undertaking income generation activities like consultancies, training and development support, sale of products (publications, maps, water testing kits, etc.), services (water quality testing) and investments. For its POs, PSI usually mobilizes funds from donor agencies and it helps communities to access government schemes for funds.

PSI's prominent donors include Bajaj Auto Ltd., The Hans Foundation, National Mission on Himalayan Studies (MoEF&CC), ITC Ltd., Tata Trusts, Arghyam, Axis Bank Foundation, Frank Water, India Friends Association, International Service Society and UNDP. In the past it has received funds from CAPART, The Prime Minister's Office, Department of Science & Technology (GoI), Oxfam (India) Trust, The Ford Foundation, Azim Premji Foundation, various state governments and WWF-India, among others.

PSI's annual budget is typically about Rs.45-55 million. In addition, the Institute helps its partner organizations and communities to annually mobilize about Rs.5 to 10 million. It is estimated that overall, for every rupee spent on salaries and administration, about four to five rupees are spent on program activities.

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[9] Even though many donors are keen to release funds for POs and communities through PSI, the Institute encourages them to deal directly with the concerned POs and communities to build their capacities to handle funds and access them. PSI helps monitor the expenditure and accounts.

Contact Details

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