Sustainable Development

A brief expose on conceptual underpinnings and activities

PROFILE

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Environics – the interface of environment and human behaviour

Environics: Our Institutional Proposition

Having entered this new millennium, browsing back for repair or reviving natural systems already damaged is not a matter of choice anymore. It is now common ground to perceive limits: Development as it has been practiced over the past, particularly in the final century of the last millennium, has raised the issues of resource availability, environmental stability, social and economic viability that we now perceive its limits and limitations. Today's development processes lack the variety to deliver the basic demands of the communities and thereby forces us to look for new paradigms and processes that can meet the aspirations of current generations without foreclosing future options. To respond to this complex task, humankind has evolved newer concepts and paradigms and organised people and resources to form institutions. **Environics Trust recognises that it is one among the myriad such initiatives across the globe.**

In the last decade a perceptible shift has occurred globally, with the reversing of natural resources destruction and conserving a healthy environment becoming explicit objectives of development. It is founded in the belief that development must not come at the expense of the life-support systems of other groups, or later generations, nor threaten the survival of other species. Every community responds to the diversity and complexity of specific eco-systems and social environments. Our attempts to respond to critical and sustained needs of the communities through various processes has led us to explore the concept of Sustainable Development for carving out pragmatic processes leading to the evolution of sustainable communities.
From such a perspective, Environics Trust defines **Sustainable Development as the `set of processes that enables the local and global systems to be in ecological harmony'**.

The four non-orthogonal attributes of sustainable development, which are crucial to the state of being in ecological harmony, can be described in the form of the state of these attributes.

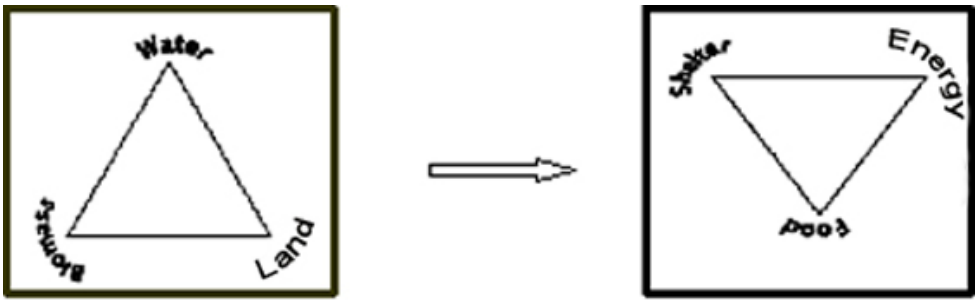
- Equity and Justice
- Environmental Soundness
- Endogeneity or Self Reliance
- Economic Efficiency.

Environics Trust's proposition is that "**Societies should identify, evolve processes and implement programmes that concurrently address these four attributes at whatever levels and scales the intervention takes place."**

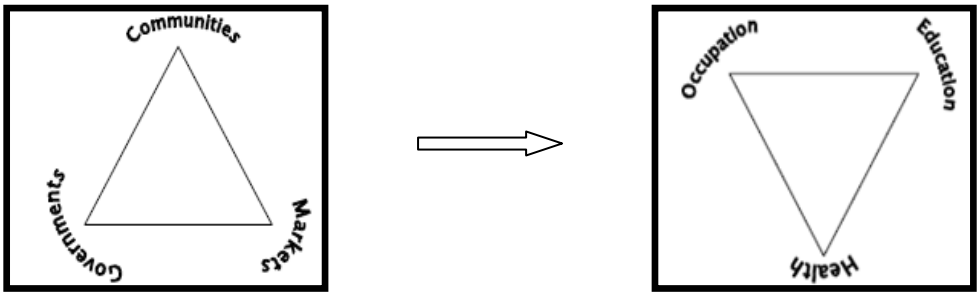
Given the diversity of the biophysical environment, the processes may be simple or complex and its dynamics largely determined by the context. The psychocultural systems however have become complex and often complicated. **Therefore SUSTAINABLE DEVELOPMENT is practically an exercise of conserving existing options and generating more alternatives.**

Environics Trust's consistently applicable model is based on an understanding of the existing biophysical and psychocultural systems, which is the basis to modulate the inputs within the functional space of the institution.

The basic biophysical underpinning for any effort can be visualized as the triumvirate of biophysical resource potential of **Water-Land-Biomass**. These loops must be closed at the smallest scale providing for the basic biophysical needs, expressed as the triumvirate of biophysical resource demands of a society, in the form of **Food-Energy-Shelter**.



The psychocultural environment presents the institutional resource potential in the form of the **Government-Market-Communities**. The primary charge of these institutions would be to meet the psychocultural demands of the society in the form of **Health-Education-Occupation**.



The evolution of these systems and their mutual interaction particularly determine endogeneity (~ self-reliance) of a society to meet its developmental aspirations in a sustainable manner.

While at the biophysical level one could be a little more deterministic to state that more immediate and local the needs are met the more sustainable it is likely to be, it is much more complex to determine the levels and scales at which psychocultural needs must be met. The nation state has been a unit in articulating the demands and is overwhelmingly accepted as the scale at which these needs are addressed, despite exposures of the inability of nation states to meet these needs in acceptable manner. This has resulted in a situation where societal governance has come to mean **`keeping discontent within manageable limits' rather than a proactive process of creating conditions for life fulfilment.**

Environics means the study of the influence of the environment on human behaviour. In its mission **to evolve innovative solutions to the problems of community development** Environics Trust interprets it more comprehensively as the mutual influences of environment and social behaviour

These delivery of these innovations are through channelled through the processes **of Participative Research**, which enables documentation of existing conditions and the changes aspired; **Community Based Action** to demonstrate the possibility of transforming innovations into a physical and social reality; **Enterprise Development and Servicing** to respond to the current reality of the economic world and identify sustainable entrepreneurial and occupational niches and **Communication** to interface with a larger universe, to mutually learn and contribute. **Environics Trust particularly reaches out to mountain, mining, coastal and other marginalized communities.**

- Participatory Research
- Community Based Activities
- Enterprise Development & Servicing
- Communication

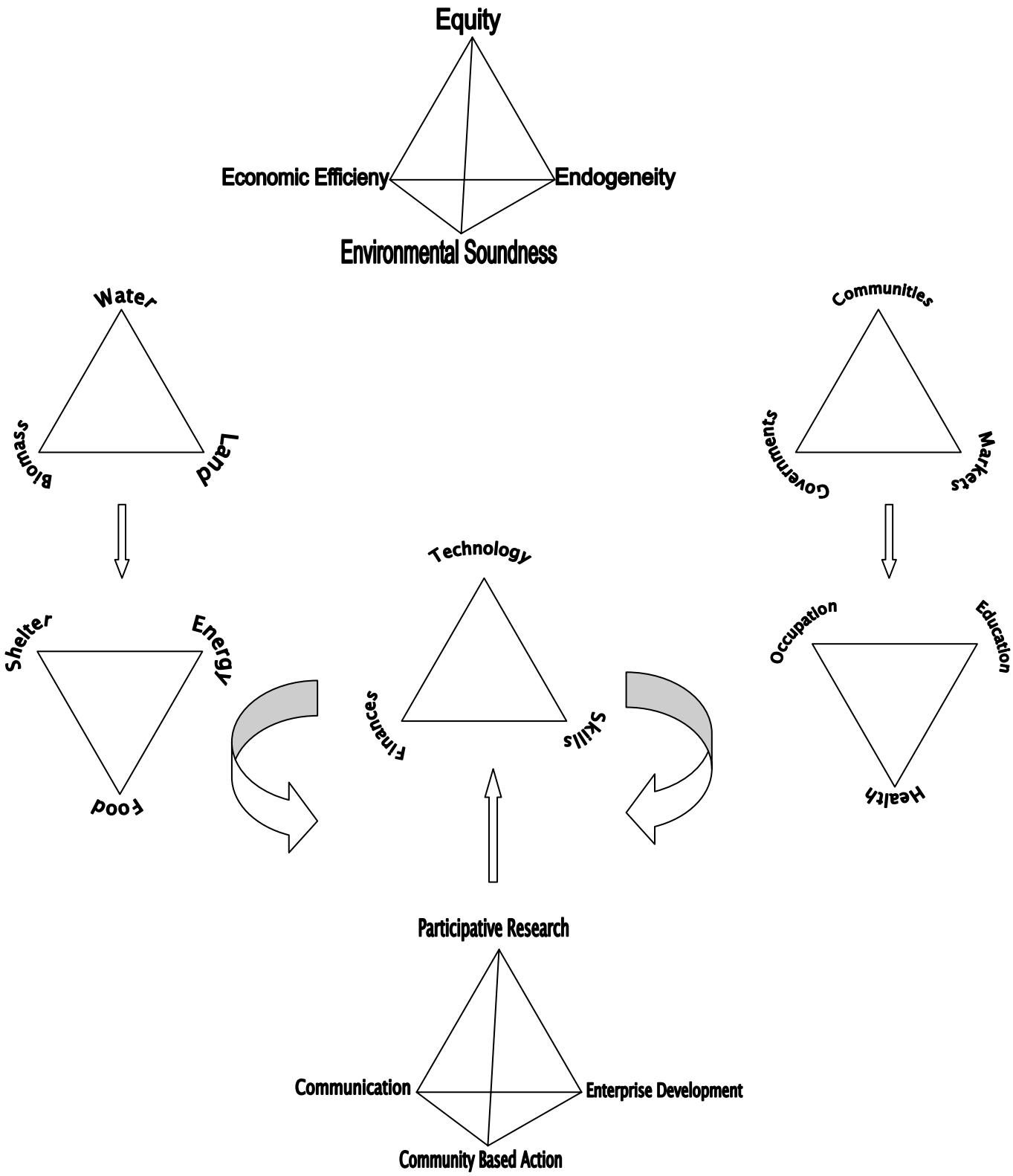
AND FINALLY A WORD OF CAUTION, A MODEL IS NO REALITY, BUT A FRAMEWORK TO ENABLE.

Environics Trust – the evolution

Years of work in the mountain areas and demand for action elsewhere has enabled us to evolve into the Environics Trust with the following objectives:

- To conduct research and development on environmental issues and human behavioural aspects;
- To implement programmes for community development;
- To promote art and culture, innovate and implement technical and institutional designs for an integrated development of the society;
- To assist, guide local governments, state and central government and international agencies in their development efforts;
- To provide assistance to communities to redress injustices and uphold their rights;
- To diffuse useful, educational, literacy, social, academic, professional and other knowledge;
- To apply results from scientific research for protecting local and global environment;
- To promote Environics as a discipline converging various subjects related to environmental sciences and human behaviour.

Sustainable Development



(PR-1) MOUNTAIN TOURISM FOR LOCAL COMMUNITY DEVELOPMENT

International Centre for Integrated Mountain Development (ICIMOD), Dept. of Tourism U.P and H.P Governments; Public and Private Tourism Operators in Uttar Pradesh Himalayas and Himachal Pradesh; Community Leaders and Elected Representatives, Local Institutions, Local Entrepreneurs

Mountain Tourism for Local Community Development - An Overview Assessment

This overview assessment attempts the discovery of processes to transform Mountain Tourism into sustainable opportunities for local community development. The project is designed to develop and suggest to various institutions policy, programme and project alternatives to enable such transformation. The specific objectives are:

To conduct a state-of-the-art review of mountain tourism, in the hills and mountain regions of UP and HP in India,

To assess, through one case study in each state, in a specific tourist area, the situation with respect to the tourists 'carrying capacity' and explore the feasibility of different alternatives to mountain tourism on sustained basis.

To identify possible mechanisms of integrating tourism with environmental development as well as local farm and off-farm production possibilities; and

To assess and identify possible institutional and other mechanism of strengthening the capability of local people and communities to devise maximum employment and income benefits from mountain tourism.

Outcomes

The report presented a detailed analysis and suggested a list of action plans at various levels to

Explore the baseline information available & needed,
Evolve a national tourism policy for mountain regions,
Review of policies in other tourism related sectors,
Eliminate inconsistency in Policy directions through programme level, plan level actions.

Specific initiatives that are necessary at the Central and State levels were identified. It also provides specific action plans for the state of UP and HP states of India. The report has been published by ICIMOD as a discussion paper.

Case Studies in Kinnaur District, HP and the Badrinath Tourist Zone

The overall objective of the case study programme was to develop an action plan and an implementation framework for sustainable tourism in the specific destinations. To initiate the process, two case study areas, Kinnaur District in Himachal Pradesh which was opened up for tourists only in this decade and Badrinath Tourist Zone where pilgrimage has been taking place from time immemorial were selected for detailed analysis of tourism carrying capacity.

The specific objectives were:

To prepare an inventory of biophysical, socio-economic, and infrastructural resources in Kinnaur district and the Badrinath Tourist zone of the north-west Indian Himalayas,

To classify and categorise broad tourist zones, in terms of routes or areas and various experience zones, to enable the prioritisation of actions,

To evaluate singular and synergetic impacts on the environment and map the perceptions of the local people on the seriousness of the impacts,

To set and determine the 'carrying capacity', to assist in making decisions about acceptable visitor use and the infrastructural and managerial support systems required, and to express critical thresholds in terms of 'communicable indicators'.

To develop action plans and implementation frameworks for specific communities.

Outcomes

This study provided an overview of the nature and implications of tourism in the region. A number of inferences were drawn on how tourism can become a more important and focused initiative in the region. The important aspects are as follows:

Information and Training needs for local level planning and Implementation;
Need for Tourism Research Information Package (TRIP) Software;
Data needs for continuous assessment of carrying capacity;
Monitoring and feedback to management on carrying capacity.

Micro Case Studies - Shimla, Spiti and Rajaji National Park

This study is in sequel to the previous case study of Badrinath and Kinnaur in order to explore different eco zones and their tourism implications. The overview studies and these case studies would form the kernel of the training materials being developed for tourism professionals at different level of interventions. The specific objectives envisaged for the micro case studies were:

To broaden the understanding of the impacts and implications of tourism in these areas and their fringes;

To develop, on the basis of output of case study of the area and additional in-depth case study training modules and materials on mountain tourism for policy makers, programme managers, the private sector agencies and local community;

Pilot training for policy makers, programme managers and local community based entrepreneurs on the aspects of eco-tourism planning and management.

Outcomes

The nature and implications of tourism in cold deserts, urban environments and in wild life sanctuaries to the local communities has been highlighted. The important aspects are as follows:

Identifying and Collating Information Systems for Urban Management

Evolving a strategy Solid Waste Management for Urban Shimla

Devising mechanisms for communities affected by restrictions from Environmental Protection.

Addressing specific needs of nomadic tribes using these areas

Need for Training and Equipping Local Elected Bodies

Imparting Training to Local People Involve in Tourism Activity

Beside these initiatives, some specific recommendations for the case study areas were also made and set of follow-up activities have been initiated.

(PR-2) WATERSHED MANAGEMENT IN DOON VALLEY

Watershed Management Directorate, Dehradun; Land Use Planning Directorate; Local Elected Bodies, Mahila Mangal Dals

Overview studies on the Doon Watershed

The programme focus is to provide develop an overview on Doon Watershed and the conservation needs are documented. This has complemented the studies undertaken by the Watershed management Directorate and provided a broad framework for participation among different stake holders in the Doon Valley:

To compile a State-of-Art-report on the water situation in the area to prioritise research and action needs,

To involve local community in the research and implementation process and to train local youth on monitoring water situation on continuing basis and evolving a set of efficient and equitable use practices,

To evolve a strategy for continued support, to the watershed programme, by devising synergetic activities.

Outcomes

An overview study on the Doon Watershed of Doon Valley has been undertaken. This report presents a comprehensive data compilation undertaken to document the various factors governing the watershed programme like area, soils, vegetation, slopes, erosion, spring location and characteristics, water bodies etc.

The report identified the priority areas for detailed research and action plan preparation within the Doon watershed. Dwara micro watershed was selected for specific area for detailed study and development of action plans.

(PR-3) MARKET-ORIENTED AGRO-CLIMATIC REGIONAL PLANNING PROCESS: INSTITUTIONALISATION IN TEHRI GARHWAL

Planning Commission, Government of India; Zilla Panchayat, Block and Village Panchayats, Mahila Mangal Dals, Local School Teachers, Non Governmental Organisations and Community Based Organisations; University Departments

Tehri Garhwal district was chosen as a pilot district under the Agro climatic Regional Planning Programme of the Planning Commission of Government of India. This programme aims to evolve a spatial planning process shifting focus from the sectoral planning of the Government. The Zilla Panchayat is the elected body at the district level responsible for enabling the process. Constitutional 73rd amendment, acts as the prime guideline for the integration of various sectors and agencies in the process.

The Academy provides all the technical and information support for the activity. ACRP aims to bring together resources, technology, people and institutions for the development of resources and their optimum utilisation on a sustainable basis.

Outcomes

The members of the Zilla Panchayat were exposed to the planning framework and the intricacies in the institutionalisation of the process. The Academy and professionals of the Agro climatic Regional Planning Unit of the Planning Commission have been involved in organising periodic meetings at different levels and one-to-one exchange with different elected members. An overview report for the Tehri District was prepared and circulated among the members. The Chamba development block was chosen for detailed assessment of the agro climatic potential and identifying the priorities of the local people.

The village councils in the block were surveyed by the professionals of the Academy in association with NGOs working in specific locations, and members of the Block Panchayat. Consultations were held in all village councils with members of the Panchayat, the Mahila Mangal Dals and other key persons in the village.

On the basis of survey a report was generated which proposes specific activities in selected areas. Some of the activities that are proposed and some which are operational are:

Integration of various ongoing development programmes and finding a common ground which has resulted in the dovetailing Watershed development programmes,

Identification of Nyay Panchayat as a scale for designing community based plans and incorporating this in the energy planning activities,

Establishment and encouragement to Food processing units.

Promoting Poultry farming,

Fish hatcheries and fish pond development,

Encouraging Angora Rabbit Farming,

Establishment of plant propagation Nurseries and development of fruit and vegetable belts,

Promoting micro-irrigation systems,

Promoting alternate energy generation systems including micro-hydels.

Several activities have been initiated and there in enthusiasm among elected members in other blocks and adjoining districts to embark upon similar programmes.

(PR-4) URBAN ENVIRONMENTAL MANAGEMENT

Municipal Corporations, Local Institutions, Concerned Citizens, Garhwal Mandal Vikas Nigam, Garhwal Jal Sansthan, Non Governmental Organisations; RUDO, USAID, EHP, USAID, Research Triangle Institute, USA

Solid Waste Management system for Mussoorie - A Plan.

The objective of this project was to quantify the waste generation and to examine the modalities to manage it properly. Taking into account the resource constraints that exist in Mussoorie the study brings together the information which can be used for matching or 'triangulation' to narrow the chasm at different levels. This strategy - guiding principles, policy instruments, technologies, and participation of private agencies and government can easily and effectively solve the problems related with solid waste management in Mussoorie.

Outcomes

The report identified the solid waste problem in Mussoorie. It also quantified the amount of solid waste generation and suggested some recommendations and solutions to cope up the present problems of Solid Waste Management. It also demonstrated the need for organisations other than the Municipal Board to be consciously participating in this effort. As a sequel to this Academy has identified a ward from where the management of solid waste has been taken-up by local groups.

Urban Environmental Mapping - Dehradun

The aim of the study was to prepare a set of urban environmental maps for Dehradun city. Though the study incorporated four objectives but the overall objective is to develop a strategy for environmental management of urban Dehradun towards sustainable development.

AME team selected Dehradun for providing a Municipal tool for urban managers of Dehradun. This report presents a detailed information collection, analysis and assessment of environmental problems and urban infrastructure management of Dehradun. This report also identified the priority areas of action that needs to be bestowed at the wake of alarming environmental problems in the target area. The subsidiary activities of the projects were to examine and identify the critical factors and linkages that affect the environmental and infrastructure in the city and integrate them to identify specific action plan that can be adopted to alleviate the critical environmental problems.

Outcomes

The major outcome of this programme is that the environmental Atlas which is first for Dehradun Municipal Administration. This document would be of utmost help to the administrators, planners, urban managers, researchers and even to students of Dehradun who are involved in urban infrastructure and environmental management. Specific action plans were framed to tackle the most critical and imperative problem areas of urban Dehradun. The study and its findings were extended to local schools to educate and enhance the awareness of school

children on environmental practices and sustainable development of the city. Academy is actively providing its input to the 'Save Doon Campaign' for the upliftment of society and betterment of city. The report will be updated soon through a programme for revision and production in larger numbers aimed at disseminating the information to a larger public through the support of institutions based in the city.

Coping Cost of Intermittent Water Supply in Dehradun

The primary objective of this project is to discern the feasibility of 24 hours full pressure water supply at Dehradun.

An extensive primary survey was conducted in Dehradun adopting the stratified random sampling method. A total of 1120 Households and 76 Institutional/Commercial units were surveyed to reveal the water related practices, environmental health conditions, socio-economic status and willingness to pay for continuous water supply. The data were analysed using Statistical Analysis Software - a SAS data base management software. An extensive secondary data collection related to water supply was also incorporated in the study.

Outcomes

The analysis of survey results showed a majority of respondents prefer an increase in water supply hours. A first-cut cost-benefit analysis showed a good positive indication for establishing a full-service water supply system. A demonstration model at the nearby village 'Mehuwala' with essential upgradation in existing infrastructure is proposed as the follow-up activity. Under the operational conditions, the viability and advantages of having increased water supply can be tested for replication to other parts of the city.

Urban Environmental Mapping - Shimla

The aim of the study was to prepare a set of urban environmental maps for Shimla city and the compilation of disseminated information which will facilitate to delineate the critical problem areas and the solutions for managing it.

This report presents a detailed information collection, analysis and assessment of environmental problems and the impact of Tourism activities in the town. This report also identified the priority areas of action that needs to be bestowed at the wake of alarming environmental problems in the target area.

The adjunct activities of the projects were to examine and identify the critical factors and linkages that affect the environmental and the over use of infrastructure services in the city and integrate them to identify specific action plan that can be adopted to alleviate the critical environmental problems.

Outcomes

The major outcome of this study is the Environmental Atlas of Shimla with annotation which is first for Shimla Municipal Corporation. This document would be of utmost help to the administrators, planners, urban managers, researchers and even to students of Shimla who are involved in urban infrastructure and environmental management. Specific action plans were framed to tackle the most critical problem areas of urban Shimla.

A specific concern was the issue of solid waste management. A special training and interaction workshop for elected members and officials of the Municipal Corporation was organised as a direct outcome of this study. Currently a set of programmes have been initiated in the city with the participation of several institutions.

24x7 Urban Water Supply Systems
Innovations for Meeting MDGs in South Asia
A Rapid Action Assessment for Dehradun
[ADB, Biodiversity Conservation India Ltd., AI Tech Foundation, Environics Trust & Academy for Mountain Environics] 2005

Water for all, with efficiencies, is the slogan. More than water, it is the institutional innovations that can be brought to the ground to manage water supply systems in a decentralized and efficient manner. Water in one or the other way has been addressed by us over one decade. We started understanding the coping costs of intermittent water supply in the year 1995, the era when "continuous water supply" phrase was alien and difficult to digest by city water engineers and many others. It is now that it is heard often from various arenas. Dehradun was chosen as the pilot city with all the ground knowledge ought to be proving the idea.

Dehradun's water supply is dependent on tubewells (56) with a little (27%) support from the surface waters, the north ridges bring calcium along with water and it scales the pipelines, electricity is critical input to the tubewells to pump water on daily basis but is erratic, unaccounted for water is estimated to be 15% officially but is way beyond this, rainfall (2200mm) received is high but not productively harnessed, number of slums have crossed the century but neglected and need reclassification and improved service delivery, institutions are many but need collaborative works and acceptance (nearly 19 institutions have independent water supply) and the water utility (Uttaranchal Jal Sansthan) supplies water to all but suffers a loss of Rs. 2,00,000 by every day.

Incorporating Sustainable Solutions;

Economic Efficiency	decentralization, conservation and user efficiency
Environmentally Sound	controlling unaccounted for water, assessing dilapilated infrastructure, enhancing distribution systems to optimize with natural lay

Equity	water consumption vis-à-vis water charges, a transparent process of management
Endogenous	community institutions to manage by infusing skills, finances and user practices

The proposition is that Dehradun doesn't need additional water sources to supply to its citizens; it needs institutional coherence, decentralized management by the communities where the water utility becomes the bulk water supplier and rest is managed within the water zone by the local water user's association. Leakage is the other non revenue stream which needs upfront support from locals rather than just technology. Communication of technical aspects, awareness, and user behaviours was done through folk songs, street plays, puppetry.

The short term target is to demonstrate 24x7 practice in the two water zones whereas the long term focuses on conducting research and monitoring. The group is also cautious that "better practices need behavioural changes" and this innovation is foreseeing a process which can set into the ground and enable other groups and communities to transform their water supply systems to continuous water supply systems.

The following are being pursued as the steps of the process;

- City Level Efforts at creating viable water supply zones
- Demonstration of community practice
- Institutional 24x7 practice
- Evolving communication systems for adapting to change
- Conducting concurrent research and monitoring practices

(PR-5) A STUDY AND FOLLOW-UP ON GARHWAL PORTERS

Porters in the Region; Himal Magazine, Kathmandu, Nepal, Lal Bahadur Shastri Academy, Mussoorie

The prime objective of the study was to examine the overview situation of portering activity in Garhwal Himalayas, and to explore the lives of porters and understand their economic conditions.

Portering is unquestionably the most excruciating activity for making a living. The terrain in the Himalayas calls for head loading in many parts as it is the only means of transportation of heavy loads, etc. Further, tourism has demanded the services of porter in many places in the region.

Two of the four 'Dhams' Yamunotri and Kedarnath are still not connected by road, where carrying goods and pilgrims is an important task. Keeping this in mind, beside Mussoorie's hand pulled rickshwala's , we have taken-up two places for our case study. Portering is also the key to many successful mountaineering expeditions and trekking in the high mountain regions. It is a much specialised task, only people with specific skill and stamina are in the position to undertake various types of portering activity.

Outcomes

In Mussoorie, the hand pulled rickshaw has been made a thing of the past. The intervention of LBSNA, Mussoorie and Rajeev Gandhi Foundation, New Delhi and the efforts of local citizens this age-old system of hand pulled rickshaws becomes history. Academy was also involved in the study of options for rehabilitating of these rickshawalas in their respective villages by providing them with an alternate employment opportunity.

(PR-6) HOUSING SUPPORT SERVICES IN GARHWAL

Shri Bhuvaneshwari Mahila Ashram, Stone Craftsmen of Tehri District; Masons and Housing Interest Groups in Gairsain Block of Chamoli District

To provide input to develop a Housing Support Services of BMA and devise opportunities for local masons and building workers

To assess the feasibility of establishing a cluster of building centres in the Garhwal region.

Outcomes

Since the earthquake of 1991 there has been very little follow-up in the area of building construction and provision of materials and technologies. This programme was initiated to provide support to the largest voluntary organisation in the region, Shri Bhuvaneshwari Mahila Ashram and carve out teams that can viably provide housing support services.

(PR-7) PEOPLES FORESTRY MANAGEMENT

Panchayat Sewa Samithi (Lead Institution); Centre for Development Studies, Government of Uttar Pradesh, OXFAM, Van Panchayats of Chamoli, Pauri and Rudraprayag District, International Centre for Integrated Mountain Development

Policy perspectives and Institutions for Peoples Forestry Management

The forests of Uttarakhand are largely held by the State. The people's movements in the first two decades of 1900s forced the British government to set apart forest lands which will be managed by local people. These institutions demonstrate the ability of local people to manage effectively their resources.

The recent policy changes have been severely constraining local people in terms of access to resources and have been the cause of conflict between the State and citizens and also between communities.

Outcomes
A comprehensive document on Peoples Forestry management spanning issues from policy perspectives to local conflict resolution was produced. The document highlights the policy issues and the institutional aspects of forest management.

The study has lead to conflict resolution exercises with specific communities and has put the Van Panchayats back on the Agenda of government policy.

This effort also contributed to the emergence of a Solidarity Group of Voluntary Organisations to support people from Protected areas of the region. Janaadhar manages the Secretariat.

Peoples Forestry management and the Role of Elected Bodies

The relationship between the elected bodies, the State forestry and Revenue departments and the institutions for forest management was explored. The roles and responsibilities were analysed to provide an overview of the overlaps and inconsistencies in the policy and operational frameworks.

Outcomes
The results were shared with communities from the entire Hindukush Himalayan region and a broad framework for analysis and community action in Uttarakhand was drawn up.

(PR-8) COMMUNITY BASED ENERGY PLANNING

Village Councils in Palas Nyay Panchayat; Local NGOs; Watershed Management Directorate; International Centre for Integrated Mountain Development

Energy planning has for long been an activity of the State and local communities were passive recipients of whatever the government provided. During the past two decades renewable energy devices have been introduced. However, these efforts have not been comprehensive and the fact that energy production can occur at local levels was not fully comprehended. This collaborative programme with ICIMOD, which is concurrently working in several countries in the Hindukush Himalayas on the programme, provides a basis for evolving a comprehensive plan for energy generation and utilization.

Outcomes

The survey of all the households in these settlements has been completed and potential for deployment of energy devices and generation of power locally has been identified. Efforts are on to implement through local Panchayats and entrepreneurs various elements of the community plan.

(PR - 9) CONDITIONS OF ELDERLY WOMEN IN TEHRI GARHWAL

Anugruha (Lead Institution); ONGC; Local NGOs; Community Based Groups

The problems of elderly women are critical in mountain areas especially where male migration is very high. The study involved analysis of the detailed survey undertaken by the Helpage Consultants and to identify livelihood opportunities for the elderly in the Narendra Nagar and Chamba Blocks. The problems and aspirations of the elderly women under score the need for specific interventions focused on the elderly. An intervention plan has been evolved and is expected to take shape in the form of specific programmes. The plan highlights the need for ownership as a basis for livelihood generation amongst the elderly.

(PR-10) ENTERPRISE DEVELOPMENT OPPORTUNITIES

Potential for Mushroom Production through Women

The objectives of this programme are:

To develop a low cost cultivation shed for Mushroom cultivation for rural people and explore the potential to train women to cultivate and market mushrooms,
To impart training and education on Mushroom cultivation,

To identify locally available agri-substrate and alternative technology for composting.

To prepare strategies for popularising Mushroom use as cheap, high calorific food for masses and meet the malnutrition problem in low-income groups.

To catalogue the mushrooms of economic importance in the Garhwal Himalayas.

To develop database in the form of a field guide for common uses.

To identify and test organic alternatives for fungicides and insecticides used during different phases of Mushroom cultivation.

Feasibility of Spring Water Bottling Plant, Uttarkashi District
Biodiversity Support Programme, Biodiversity Conservation Network

There are numerous natural springs in the Himalayas and many of them have either vanished or their flow considerably reduced largely due to degradation of the catchments. If spring water is turned into an economic product for the people, the interest to save the catchment and the quality of water will be significantly enhanced. Further, with the exponential increase in the demand for bottled

water throughout the world Himalayan spring water has the potential to offer a large opportunity for local communities. In order to enable such an enterprise to develop, the studies focused on the following:

Identify the sources where water is in abundance to cater to local needs and to provide for the market;

Characterisation of the quality, shelf-life and other factors relevant to human consumption after storage;

Mapping the current biological conditions of the catchment and the interventions required to ensure the availability and quality of water;

Assessing the viability of bottling and marketing with various plant and packaging options.

Outcomes

The feasibility of bottling in conventional packaging systems were worked with the investment requirement and the level of external inputs required to enable the local communities to enter the market. The clearances from the Central Government were delayed and the project could not compete for funding under the programme. The conventional systems demand use of plastics and significant capital. Therefore exploration is continuing on alternate packaging systems that can be more environmentally friendly and less capital intensive. In the intervening period, the Garhwal Mandal Vikas Nigam took help to establish the *Bhagirathi Mineral Water* few kilometers downstream without the conservation or community development objectives.

STATE OF ENVIRONMENT REPORT, UTTARANCHAL

[EPTRI, IDFC, UEPPCB, Environics Trust & AME]

Academy for Mountain Environics brought in local insights to the First State of Environment Report for Uttaranchal along with Infrastructure Development Finance Company Ltd. (IDFC) and Uttaranchal Environment Protection and Pollution Control Board (UEPPCB). The report was released on November 9, 2004. Though the methodology adopted was that of DPSIR (Driving Force, Pressure, State, Impact and Response), the paucity of data was compensated by providing anecdotal references to the development process and the environmental incidences that would demand innovative, pro people development initiatives (involving community as partners rather than viewers).

Uttaranchal is endowed with enormous natural resources under its state area of 54,000 sq. kms.

with a population of only 85 lakhs and nearly 80% of urban population residing in plains, the interventions need strategies towards building efficient infrastructure systems and promoting development in the plains and initiate planned process in the hills which ensures livelihoods enhancement and secure rights. The efforts have just begun and also need to find sustainable ideologies if not sustainable development, in the first instance. People are composed and knowledgeable, community institutional base is strong; the need is for synergies among community, market, and government institutions to foresee a promising future for the state.

Environics, as we say, is an interrelationship among the human behaviour and the environment; thus not considering only physical environment as a parameter of development or ecological wealth. The report clearly states that, the driving forces in the state were:

Liberalization
1962 war with China
Political and Administrative Convenience

These may not be comfortably taken by hard core environmental professionals but this is the real scenario and the understanding of this can only lead to entry gateways of development along with situational and natural setting of the state. Geographically, the state is spread between river systems (valleys) of Yamuna-Ganga, Ganga-Ramganga, Ramganga-Sharda. Also the other dimension is its altitudinal setting viz. Terai & Shivaliks, Doon valley, Lower Himalayas, Middle & Higher Himalayas and Trans-Himalayas. So the planning approach has to address such

environmental situations like ACRP (agro climatic regional planning) is one among the approaches.

Several issue are identified as per their regional and natural setting which need actions to strengthen and also to open avenues of employment generation and create a sense of openness for the communities. Uttaranchal need to look at the institutional processes which must convert from sectoral to thematic or de sectoralisation, decentralized governance. The understanding of sustainability is far more important than just picturesquely promoting sustainable development per se.

The next step!
The efforts are on to reproduce the volume in hindi and focus on action programmes which can inject dynamism for the development of the state and the People.

COMMUNITY BASED ACTIVITIES

(CBA-1) SPRING WATER MANAGEMENT IN DOON VALLEY, U.P

Local People of Dwara Gaon Sabha; Village Panchayats; Mahila Mangal Dals and Staff of Watershed Management Directorate

Background

There are numerous natural springs in the Doon Valley. These are important sources of clean water and were highly dependable, but are susceptible to local and long-term changes induced by human activities like road-building, deforestation and construction. Many of the springs in the region have become seasonal and others have disappeared. A concerted effort to rejuvenate hill springs and develop community management systems for their effective utilisation was necessary. The Dwara watershed programme is a pilot project for designing watershed conservation programme of WMD, Dehradun. The report presents a assessment of the resource base, socio-economic status, landuse practices and management etc. The report presents in detail, the spring location, catchment characteristics, flow, hydrogeological components and controls. A detailed action plan for the conservation and augmentation of spring waters was developed indicating the recharge zones and a training schedule was developed for the local people in the design of storage structures and distribution systems.

Specific Activities

Ten Springs in and around Dwara Micro watershed and measures to consistently monitor were established.

The storage systems were constructed and afforestation was undertaken in specific spring catchment zones.

The villages have initiated a process for the establishment of Van Panchayat.

Lasting Relationships

Communities in Dwara and Kesarwala have been participants in various other meetings and programmes in the region. Intervention to create markets for the Basmati has helped some farmers.

Watershed Management Directorate has been seeking inputs or providing support to some of the suggested activities.

(CBA-2) GEO-SCIENTIFIC ISSUES IN SARDAR SAROVAR DAM PROJECT

Narmada Bachao Andolan (Lead Institution; Geoscience Community, Activists concerned with Impacts of Large Dams

Background

The common concern against mindless pursuit of large dams was the focus of this effort, particularly after the seismic events in the peninsular areas of the country. This lead to a revisit of the existing information on Sardar Sarovar Dam and highlighting critical geoscientific issues.

Activities

An investigation team was constituted which gathered all the relevant information. Intense discussions were held with experts in specific disciplines. The efforts lead to the identification of the inconsistencies in geo-scientific information and the lack of critical information which form the core of decision making by the Project Authorities. Some specific questions and recommendations seeking the reduction of dam height, specific redesign requirements were proposed and crucial questions on the incompetence of foundation rocks, fluctuating pace of construction, inadequacy of design, and presence of extensive fracture lineaments were highlighted. The results were publicised through media. The report was called for, *suo moto* by the Supreme Court and the promoters of the project directed to respond and resolve the issues.

Lasting Relationships

The communities demanding justice are a part of NBA and NAPM.

Several geoscientists, administrators and legal experts have found such efforts of complementary nature and continue to support the cause.

(CBA-3) MINES, MINERAL and PEOPLE

Communities Affected by Mining, Samatha (Lead Institution); NGOs and CBOs in mining areas; Mining Struggle Groups

Background

Mining is environmentally one of the most disturbing activities. The growing demand for minerals fuelled by the liberalised market has meant that more areas will be brought under mining. Mining has been found to be the most devastating activity for local communities. Inputs provided to local communities

and struggle groups have found value in local negotiations and in legal action.

Activities

Mining in and around Borra caves, Visakhapatnam Distt., A.P. India

Borra Caves are the largest and deepest Karst caves in India. Mining leases contravene land regulations, and mining activities were affecting this unique geological heritage. The study formed the basis for legal action. A set of documents describing the caves and the environmental impacts were developed. The Court intervened to stop mining and a local group was entrusted the role of guiding tourists visiting the caves.

Impacts of Calcite Mining and Sea-water Magnesia Plant

A series of reports were prepared involved in the then proposed Nimmalapadu Calcite Mine and Birla Periclase Sea-water Magnesia Factory (later established and abandoned). The first report brought out by Academy presented an overview of the plant and mine site, its general population details, socio-economic condition, land use etc. while the second report detailed out the environmental impacts, economic impacts, legal conflicts involved in the project. This report presented in detail the economic loss to the community through land, forest and its allied activities etc. It also sought for appropriate compensation through this estimation. It also projected the indirect social impacts that will be inflicted on the local people on the onset of project.

This effort supported the legal action undertaken by Samatha. The case went from the State High Court to the Supreme Court of India after a reversal of decision affecting the local people. The Supreme Court's decisive and historic judgement, of closing down the mining activities in all Tribal regions of the State has provided a great relief to several tribal communities in the State of Andhra Pradesh.

Lasting Relationships

The realization by several agencies and communities has given a boost to the efforts of several struggle groups in the mining areas of the country through the formation of mines, minerals and People. There are nearly 150 groups which are associated with the emerging alliance. For more details see www.mmpindia.org

(CBA-4) PEOPLES FORESTRY MANAGEMENT

Van Panchayats of Chamoli, Panchayat Members, Ex-servicemen Association; Local Elders; People from Protected Areas

Background

Conflict Resolution among Van Panchayats in Gairsain Block

There are numerous conflicts over the use of forest resources among different van panchayats of the region. These conflicts vary in age, complexity and the resource in question most of which however relate to the predominant Oak forests. An overview of conflicts has been evolved characterising the different types of conflicts and their implication to the local community, particularly the women. The causes of conflicts in different contexts have been explored and conflict resolution has been focused.

Activities

Three conflicts that have been under litigation for years in the local courts were brought up for resolution by the concerned villages. Several meetings were held between the members of the villages. In the two cases which were between the Van Panchayats, the consensus was not to prolong the expensive litigation in the court and specific measures were identified to mitigate the conflict. The third conflict relates to the encroachment of land by State Breeding Farm. This conflict exposes the distance between the different State agencies and how the insensitivity of the State adversely affects the lives of the people.

A plan to launch a Public Interest Litigation to relieve local people of the burden of encroachment is being drawn up.

Solidarity Group for People in Protected Areas (VANADHIKAAR)

Janaadhar (Lead Institution); People from Existing and Proposed National Parks and Sanctuary Areas in Uttarakhand; NGOs and Community Based Organisations

The people living within protected areas and those in the peripheries of protected areas have been subjected to several restrictions affecting their very basic survival. Their livelihood largely depends upon common property resources in the forest and the designation of these areas as national parks and wild life sanctuaries have been alienating them from the traditional rights of these communities to these resources.

Activities

Considering the dispersed nature of the populations affected and the consequent inability to raise their concerns in various forums, the people from the protected areas have been brought together in a common forum. A group of voluntary organisations have come forward to establish a solidarity group to provide secretarial and other advocacy support to these people.

Lasting Relationships

Communities in protected areas and van panchayat leaders from different parts of the region have found a forum and several meetings in the region have provided a basis for presenting the peoples position at various national and international forums.

(CBA-5) DISASTER INTERVENTION SECRETARIAT

Support to families affected by Riots in the Slums of Dehradun (1996)
Affected Communities; Local elders; Catholic Relief Society and Tibetan Relief Society

Riots in the slum area of Brahmapuri, lead to burning of an entire settlement of over 70 households. There were several people who suffered burn injuries and all the households lost their entire belongings.

Activities

Immediate relief in the form of community kitchen was established for the first two days. A survey of the affected families was undertaken and the survival needs identified. They were exposed to Low cost shelter materials and designs. Basic food requirements, cereals and edible oil, for nearly sixty days was organised with the support of welfare agencies. Compensation of Rs 10,000 to each family from the government was ensured. Basic health care services were provided to nurse the injured. Counseling was provided to the traumatised. Temporary lighting facilities were set up and night patrolling was done until normalcy returned.

Awareness generation for people in the Landslide Prone Area in Naitwar (1997)
International Centre for Integrated Mountain Development and Uttarakhand Vikas Vibhag

The Secretary, Hill Development, Government of U.P flagged the concern of people regarding the landslide prone area. A government public health centre was totally damaged by the landslips in the Naitwar bazaar area which was the cause of panic.

Activities

A technical team studied the landslide zone and identified the vulnerable zones. The areas that were safe for habitation were identified and explained to the community. The local youth groups actively participated in understanding the phenomenon and communicating to other members in the community. A short video film was produced. The film was used as a discussion material in the ICIMOD workshop.

Support to People Affected by Landslides in Madhuganga Valley (1998)
Affected Families; SAMVEDANA; ONGC

Landslides in the Madhuganga valley in Rudraprayag District totally destroyed few settlements. After initial relief by several agencies there was a hiatus in efforts resulting in hardships to several families.

Activities

An assessment mission was undertaken and problems of specific communities were identified. Technical advice to few households reconstructing at different sites was provided. Information was provided to the ONGC so that they could direct relief efforts to specific communities in need. Efforts were made for rehabilitation of some of the families resettled in the Doon valley.

Relief to Remote Communities Affected by Earthquake (1999)
Panchayat Sewa Samithi; Local Youth and Women of Rudra Ganga Valley; Affected Families; OXFAM

An earthquake of magnitude 6.3 on the Richter Scale rocked the region in late March leading to widespread damages. The relief efforts by the government were tardy in reaching distant villages requiring 8-22 km of trekking and climbing over 6000 ft. These villages were approached for relief.

Activities

Vulnerable slopes were analysed to ally fears of the local community on the stability of these slopes. Some areas were identified for avoidance of movement and settlement related activities. Immediate shelter needs were identified and CGI sheets to enable each family construct an emergency shelter were provided.

Construction of Community Shelters in Quake Affected villages in Birahi Valley
Hesco; Janaadhar; Local Panchayats and Community Members; CAPART

Hesco initiated a programme involving several NGOs in the region to build community shelters in the region affected by the earthquake.

The aim is to have a shelter during emergencies and to enable the communities undertake productive activities during normal period.

Activities

The villages chosen are remotely located and suffered severe damages during the earthquake. The Birahi Valley itself is highly vulnerable to landslides. There have been periodic landslides and damage to approach tracks. Site selection and architectural design work has been undertaken. Site development is complete and construction is almost completed in the village of Pagna and in the settlement of Girkhwalghitta.

Lasting Relationships

The villages in the upper reaches of Birahi Valley are in constant touch. Academy contributed to the annual fair at Irani village and has been finding ways of reaching telephony to these remote villages. A library has been initiated with books and periodicals contributed by the Academy.

(CBA-6) COMMUNITY BASED ALTERNATE ENERGY SYSTEMS

Background

Establishment of a Microhydel system in Sovva Village, Andhra Pradesh

Mirco-hydel power generation is an excellent option for isolated communities living in areas where it will take a long time for grid power to reach. At the community level it can be a viable activity with downstream utilisation programmes.

To conduct feasibility studies for a micro-hydel system

To design and Implement the System in specific site identified

Activities

Site selection and feasibility studies for a 10 kW unit have been undertaken in the Sovva Panchayat. Civil works were completed. The design incorporated a cross-flow canal which also acts as a check-dam. Community organisation in the form of a Sovva Area Electrical Association was been for operation and management. The cross-flow canal which acts as a check-dam has increased water storage and the irrigation potential has been augmented.

Intervention in the Development of Hydrams

The hydram system operates by using the energy of a large amount of falling water to develop momentum which is used to pump a small amount of water to a higher altitude. In hilly regions hydrams are playing a prominent role in irrigating the step-fields and much needed drinking water.

To find out the present status of hydrams in Hilly regions;

Training for local community to promote the use of hydrams

Providing technical support for repair and upgradation of the hydrams

To motivate institutions for providing financial resources for new hydrams and for upgradation of existing ones.

Activities

The survey work has been accomplished. Imparting training to hydram operators and upgradation work has been done in village Mohana of Dehradun District. Minor Irrigation Department has agreed to hand over this hydram to local village council and now Mohana village council is running this hydram.

Lasting Relationships

A network of institutions and communities to work on energy issues has been nucleated in the region. A water-mill owners association has been formed in the Bhatwari Tehsil of Uttarkashi.

Feasibility Study of Micro Hydel Sites in Simliguda District, Orissa

Two tribal villages of kondh and dora tribes viz. Barakutni and Gangamguda were studied. It was understood that electricity will be a dream for these tribals and with limited biomass and cost intensive solar technologies, it was thought that micro hydels could be tried due to their better functioning despite its capital costs, required that the flows are available. The issue of O&M was not that impinging as the one micro hydel put up in Pusil had a trained staff and training could be provided. The another issue was the unirrigated highlands, which range between 50-65% of the total land. Though micro hydel was chosen as the first option but the other options were kept open too. The minimum flows were studied which depicted that the required power can be generated. The catchment of barakutni extends to 2.6 sq. kms with a relief of 300 meters. Barakutni was found feasible for putting up micro hydel but with some civil works as water had to be routed to a point to achieve sufficient head. The cost per KW came to nearly Rs 60,000/KW but it would give power to 87 households.

Whereas multiple water user villages and even lesser flows in catchment of gangamguda and around, micro hydel did not seem to be a feasible option. The only option was to utilize the small bund under construction and enhancing storage capacities, which while comparing with the solar technologies, seem to be a costlier and less promising option.

The project at barakutni is under implementation.

BIODIVERSITY CONSERVATION INDIA LIMITED

To demonstrate, at a significant scale, the enterprise mode for environmental conservation and to address urban issues this company was established. The flagship project, `Transindus' is an autonomous residential enclave, in the outskirts of the city of Bangalore. This settlement generates its own power, conserves and recycles water and other bio resources and does not impinge on the resources of the city. BCIL has also promoted a Corporate Consortium for Conservation of tropical rain forests of Western Ghats in Karnataka. The company has had a cumulative turn-over of over Rs 250 million. The details about the company and its programmes are available at www.bioconserveindia.com

GARHWAL GUCHIS – DRIED MUSHROOM: A WOMENS ENTERPRISE

Dried oyster mushroom (local name Dhingri) was identified as a potential product. Training was imparted to 57 women in one compact area. Spawn supply is being ensured by the organization. The producers have grown in number to 80 within one village of Kalsi in Dehradun district. Trained women in the region currently number over 130.

The product is marketed under the brand name of `Garhwal Guchis' (guchi is the generic name for mushroom in the local language) by the Academy. The producers are free to consume and sell locally. The marketable surplus is procured with an assured base price. Periodic visits by technical staff ensure quality. A spawn production laboratory is being established.

CLARKES COURIER AND CARGO

The inaccessibility of the settlements in the Himalayas has been a constraint for easy flow of documents and goods into and out of the region, thereby marginalizing them further. The nature of surpluses from the region is also unique as monocropping is more a recent and induced phenomenon. The traditional agricultural practice fosters a great diversity of crops and the surpluses generated are small. Three local courier agencies are in operation apart from three large operators covering more than 20 locations in the region. The operations have now been closed.

SHIMLETS INFOWAY

The rapid and remarkable changes in a number of areas, particularly in the integration of telecommunication, computer sciences and satellite technologies, offers a new spectrum of opportunities for reaching telecommunication infrastructure and also to integrate isolated communities to larger economic and social context. Shimlets is formed to provide Wireless Telecom and Internet Services in close collaboration with IIT, Chennai, Midas Communications and n-Logue Communication Systems.

CENTRE FOR LIFE TECHNOLOGIES

Centre for Life Technologies, C-Lift, has been set up in Bangalore. It functions as a finishing school for aspiring biotechnologists. It is affiliated to the Wageningen University for certification of several programmes.

The Woodpecker Annual

A read, use and reuse Diary full of interesting earth facts and nuggets of information on plants, animals and cultures. This has found enthusiastic acceptance among a host of people.

Chautauqua

A compilation on Life and Living. This annual, too, has found its way to several corporate desks.

A Do-it-yourself-Kit on Vermicomposting

A handy leaflet that demonstrates in simple steps and with the aid of illustrations, the miracles you can work with leftovers and garbage at home.

Medicinal Plants for your Backyard

On how to grow and care for plants and herbs that have healing properties and how they can be used to guard against common ailments.

The Indian Ritus

A desk aid on the Indian seasons and how they touch our lives.

The Terrarium

An Earth capsule recreated in a sealed bowl representative of the atmosphere and Earth. The plants inside the terrarium are self-sustaining and need minimal care.

Manual on Pre-feasibility for installation of low/medium Head Micro Hydro Turbines

This comprehensive Field manual on feasibility estimation of microhydel, provides a set of dummy table for information collection. This will enable the user to quickly get into the work as already conceived framework for survey is made available through relevant and necessary dummy tables. It identifies the data to be collected which can be easily adapted to the various sites based on the context of the area, its accessibility, nature of terrain etc. This field manual was developed out of extensive field studies of low/medium head schemes under operations. This manual also lists the bulk of information that user has to gather in the field like technical details, location, hydrology, meteorological information etc. It also provides a format for the user to get acquainted with the estimation of cost of civil works, break-up of plant and equipment cost, analysis of demand and availability of power in the region, operational cost that would be incurred etc.

Tourism Research Information Package (TRIP)

TRIP (Tourist Research Information Package) is a fox-pro based software package on Tourism. The package incorporated secondary informations on tourism and allied activities collected from tourist centres to provide a comprehensive guide for tourists. Initially the package is designed aiming at the service of tourists visiting the hills of UP and Himachal later it would be extended to serve the other tourist destinations of the country. Parallely it also generates data base about the tourist. This integrated package is divided into two parts one designed to incorporate the details of tourist and other to provide the information required for tourist of specific destination. Beside the use it provides to the tourist, it also helps the concerned organisations to monitor and plan the tourism in a more sustainable manner. It would also enable the individual's involved in the research of tourism to update them of the tourism scenario with reliable information. This package will be updated on regular basis to provide the latest and most dependable information to the tourist and researcher.

'Bhukamp Awarodhak Bhawan Nirman Evam Nirmit Bhawan Ko Bhukamp Awarodhak banane Ke Upay: Ek Pustika' (Hindi)
(A manual for construction of earthquake resistant structures and retrofitting of already existing Structures).

This manual produced in Hindi was aimed at enabling the local people to understand the simple techniques of retrofitting of already existing housing structure. One of these guide titled *'Bhawan Hile Par Na Gire',* is a comprehensive guide for rural people of earthquake prone Garhwal region. This manual formed basis for training and extension programmes in the region. A set of simple technologies to improve stone masonry and local roofing techniques is presented along with the illustration.

`Bhukamp Banaam Samukhik Shakti' (Hindi)
(Earthquake Vs Community Cooperation a booklet exposing the reality of seismicity in the region and the role of the society)

This booklet provides a basic background to the seismicity in the region and the nature of responses that are required from various kinds of institutions. It is aimed at the local community in general and particularly focuses on how village institutions, local political and social personalities could contribute to disaster preparedness and mitigation.

Mountain Tourism for Local Community Development - Training Manuals

These manuals on Mountain Tourism for Local Community Development were designed as base-materials for imparting training to the different stakeholders in order to build the capacity for understanding the underlying issues. The four major stakeholders that were identified viz., Policy Planners, Programme Managers and Implementers, Local groups and Visitors. Three comprehensive manuals were produced and pilot training programmes held to evaluate the utility of the manuals.

The identification of Stake holders and the major aspects of capacity building led to the development of specific manuals. These manuals were designed after a need-identification workshop and detailed listing of various topics and the depth to which each stakeholder has to be sensitised in the context.

Different modules were developed using examples from the documentation arising out of the ongoing research programme and other experiences in training and capacity building in related areas.

Orientation Training Programme for Policy Planners in Hindukush Himalayan Countries, contributed to the organizing team of International Centre for Integrated Mountain Development

Training Workshop on Mountain Tourism for Local Community Development for Programme Managers and Implementers, 27th –29th September, 1997, at Ranichauri Hill Campus, Tehri Garhwal.

Training Workshop on Mountain Tourism for Local Community Development for local NGOs and Community Based Organisations, 2nd – 4th December, 1997 at Dehradun and Ganeshpur (Rajaji National Park)

Field kit and Manual for Water and Soil Quality Monitoring

This bilingual manual and kit aimed at enabling school children in urban and rural areas and local CBOs to understand the utility and importance of water and soil testing. The kit enables monitoring of 14 parameters commonly monitored to understand the quality. Water and Soil Sampling techniques and the procedure for the analysis of specific parameters are described in the manual. The standard and the norms are also incorporated. A *Field Training Expedition in Water Quality Assessment* was organized for Children participating in the 11th Round Square Conference organized by Welhams Boys School, Dehradun, 18th –22nd December, 1997

Map Exhibition and Discussions with local communities on Urban Environmental Maps of Indore, November-December, 2001, Indore

The Urban Environmental Maps produced for Indore were kept on display for a month and local community groups and general public were invited for discussions which provided feedback to the final report.

Training Programme on Community Based Energy Planning for institutions in ODAF and LAYA network, January 28th to 31st, 2002, Vishakapatnam.

Orissa Development Action Forum is a network of 10 institutions in Orissa and Laya operates as a resource centre for several groups in North Andhra.

The three-day programme focused on energy issues, planning mechanisms and the technologies readily available.

SUMMARY OF RECENT AND CONTINUING ACTIVITIES

Environics Trust has always taken up the challenge to work in challenging environments and diverse issues. This year also brought several issues of diverse nature. The projects were diverse and focused on community awareness, technical assistance to organizations and state governments. The brief summarization of projects underline the key issues covered and results obtained

1. **Rational Hydro Energy Development**
   Supporting Organisation(s) - Christian Auxillary for Social Action (CASA)
   Conducted by Environics Trust

   Hydropower is seen amongst the cleaner energy options throughout the world and Himalayan regions are naturally the preferred areas for tapping the potential. The huge concessions by the central government has lead to a sudden focus on hydropower without doing comprehensive analysis of requirements and needs for the state and what losses the regions as well its people will suffer. This study highlight the national and local imperative aspects and how subsidies create a market that may not be always favourable for the communities.

   Uttarakhand is witnessing a spurt of hydropower projects in the Himalayan regions. There have been varying arguments for ROR and dam based projects but each project neglects the local community concerns. Organising a meet of actual affected or likely to be affected, living in vulnerable situations and bringing out a charter for rational hydro power development is the theme of the programme. The field visits were conducted and a state level meeting of community people from affected regions organized in January. The programme is taken ahead by the local groups and several situational issues are being handled by the coordinator of the programme. Publication of newsletter is also planned for launch in October.

2. **Impact of Mining and Allied Activities in Keonjhar and Mayurbhanj**
   Supported by Lutheran World Services, India,
   Conducted by Environics Trust

   Orissa is a mineral rich state and the irony is that most of these mineral regions are also scheduled areas i.e. inhabited by schedule tribes and primitive tribal groups. This has raised concerns over diminishing cultural class of people like tribals and impacts on environmental situations and areas converting to derelict land uses. Mining by its very nature has been at the center stage of being called as an unsustainable activity concerning environment and human population.

   The conduct of the study is done by thoroughly visiting the mining areas of Keonjhar and Mayurbhanj Districts where most of the population is of primitive tribes viz. juangs, mankadia etc. The objectives were to brainstorm with local level organizations, analyse the field level environmental and social problems associated with the mining areas that are spread across the tribal districts. Both the districts are Schedule Vth districts and several of the current developments in legislations and case laws are also

discussed to focus on tribal issues. The final broad strategies for pre, ongoing and post mining process are discussed and final specific recommendations are listed so that a focused workplan can be taken up by the organizations working in the region.

3. Assessment Of Livelihood Conditions, Options & Training Needs of People Living with HIV/AIDS in Krishna District, Andhra Pradesh
Supported by – CRS, Andhra Pradesh
Conducted by Environics Trust

This task of identifying the options of livelihoods for the People living with HIV/AIDS takes an approach of interactive sessions and conduct of small group meetings to do a assessment of the livelihood conditions and options available for livelihoods. The CRS through its partner agencies connected different such groups of people who need support for long terms as there are several factors attached in the social environment which need a careful and dedicated approach to make PLHAs comfortable in their own and outside environment. The final report has been submitted and a public consultation is due in the month of September to closely look at the assessments and options of livelihoods. The objectives of the programme were the following:-

To ascertain the current livelihood conditions of PLHAs;

- To understand the livelihood opportunities in the region
- To identify existing skills and those that can be potentially imparted;
- To identify the specific training needs for various livelihood options and the process of imparting these skills
- To conduct dissemination workshop with the Government officials at the end of the study.
- To link up the PLHAs with the existing government livelihood schemes.

4. **Earthquake disaster mitigation through innovative income opportunities in Uri Sector, J&K**
   [Department of Science and Technology (DST), Science and Society Division]

   Environics Trust was invited by the Indian Army before the earthquake to make a presentation on opportunities for income generation in Uri, Jammu and Kashmir. A team of specialists and army went to affected areas after the earthquake and it was proposed to undertake 'Dhingri Mushroom' production through community training and providing upfront support of spawn production at the local level. The laboratory has been established in Uri by our team and initial phase of socio-economic survey completed and capacity building is the next phase. The DST approved the project in November 2007. Almost more than sixty women and youth have been trained in Mushroom cultivation. Training in spawn production and value addition horticulture produce is in progress.

5. **Scoping Studies for Sustainable Cities Programme for Dehradun and Gairsain, Uttarakhand.(WWF , India)**

   WWF ventured into doing a sustainable cities programme in several cities in India, Environics was chosen to conduct scoping studies for Uttarakhand. The studies looked into the current energy requirements, demand-supply scenarios and possibility of looking into sectors which can be taken up for bringing in sustainability of resources (existing) vis-à-vis institutional strengths available. A SWOT analysis was done for both the cities.

6. **The Access Initiative [TAI], Northern India Coalition, India(WRI)**

   TAI is all about analyzing governance systems in a region/country. World over there are several member countries in the TAI network. The basic premise on which TAI assessments are based are 'access to information', 'access to Justice' and Public Participation in decision making. In each of the sub sets there is a link to evaluation in terms of law, effort and effectiveness. Environics Trust and Lawyers Initiative for Forest & Environment (LIFE) are

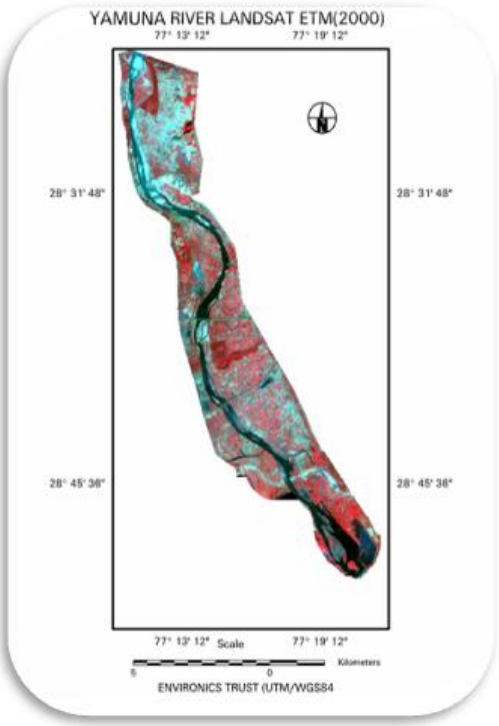
the nodal organizations taking forward the task of assessment through 18 case studies across different sectors and regions (Uttarakhand and Himachal Pradesh).

7. **The Access Initiative [TAI], TAI National Assessments by TAI India Secretariat [WRI]**

The successful completion of the TAI Himalayan Assessments has led to the formation of TAI National Coalition of individuals/organizations involved in the diverse field of activities concerning environmental governance in the country. This phase of assessments identified minimum 18 case studies of varying magnitude and nature across different eco regions of the country. An initial launch meeting (training cum case study identification) took place in April 2009 following which the assessments have been initiated using the TAI indicator worksheets.

8. **Impacts of Bridges & Barrages Over River Yamuna in Delhi (Peace Institute Charitable Trust)**

Delhi's rapid urbanization has resulted in expansion of infrastructure to cater its population. Delhi's area has remained at 1485 sq. kms. since decades but the population has increase at an decadal rate of 40-50% over the last 2-3 decades which has resulted in competing need for land for different uses. There are 8 road/rail bridges and two barrages over River Yamuna in the short 22 km stretch of river passing through NCT of Delhi. There has been no existing methodology or reporting on post facto environmental impacts of such structures. Several technical, physical and social issues were taken into account to take a holistic view of the range of impacts. This would be the first attempt ever to map the developments in the floodplains of Delhi and the relative impacts of structures over river Yamuna.



9. **Community based River Health Index for River Yamuna (PEACE Institute Charitable Trust)**

This is indeed a larger/broad initiative to understand the people-river interrelationship in different geographical regions along river Yamuna (from its origin till its confluence). The Himalayan component is being studied in two grids of 6-8 villages. The aim it to do a participatory planning and understand the river-people, people-river linkages and understand the proximate/non-proximate causes that lead to deterioration of river health. Training local teams on long term monitoring of river health by means of mutually agreed but most suitable indicators defined by qualitative and quantitative parameters is the key objective of the process.

10. **Impacts of Mining on Water and Sanitation (Water Aid)**

As minerals relate to earth, so does our water resources and in most of the cases these are in conjunction with each depending on the geographical and geological formations. Area specific case studies were identified for understanding the detailed impacts of mining in a situation of ongoing and post mining. Misappropriate assessments, approvals and compliance forms a first line of impacts followed by unscientific mining and mine closure. In several of the cases mineral availability is at a depth greater than that of water table thereby intersecting the freshwater aquifers and impacting its productivity and quality and quantity.

11. Occupational And Environmental Health Safety Network India (OEHNI)

Occupational diseases, including cancers caused by various factors at the workplace, usually take a long time to develop (from a few months to more than 10 years). Most industries tend to hire workers on short-term contracts and by the time they develop a disease, it is almost impossible to link it with their work. In informal sector it is even worse. No record of employment is maintained. Workers are not provided information about the hazards associated with their job.

Occupational and Environmental Health Network of India (OEHNI) is a network of organisations working on Occupational Health in the country. Environics Trust has been designated as the coordinating office for the network. The network is currently working on issues like Asbestosis, Silicosis and others.

12. Entrepreneurship Development Program in South Gujarat – TAPI District.

This project " Entrepreneurship Development Program'' is supported and funded by ONGC Hazira as a part of Corporate Social Responsibility flagship project UNNATI.

Goal and Purpose:-

- To promote Entrepreneurship as a vital Rural Economic Activity.
- To establish a sustainable society where women and men take initiative to learn new skills to become self-employed entrepreneurs.

AIMS & OBJECTIVES:-

- It aims at rural livelihood by establishing decentralized participatory approach.
- It will enhance the various skills to self Help Groups through training and make skilled entrepreneurs.
- It will build capacities of women and men in the community to be self-employed.
- Create awareness of Accounting Systems.
- Expansion of successful participatory models across other units of Self Help Groups.
- Mainstreaming livelihood concerns by improving skills capacity and learning.
- Improved understanding and knowledge by strengthening monitoring support systems.

INFERENCES

- There is a diversity of existing and potential livelihood opportunities in the region.
- Lot of interface is required to ensure that they make use of their skills.

- Women need focused attention as in a patriarchal society they tend to be neglected.
- Training and hand holding is required in all aspects if they have to fully benefit.

IMPORTANT WORKSHOPS AND CONFERENCES ORGANISED

Urban Environmental Status of Dehradun and 'Coping Cost of Intermittent Water Supply in Dehradun', organized in association with RHUDO and EHP, USAID and Research Triangle Institute, USA, at Dehradun. *29th September, 1995.*

Workshop on *'Agro Climatic Regional Planning'* in collaboration with Planning Commission, Government of India and Tehri Zilla Panchayat at Bhagirathi Puram, Tehri. *23rd March, 1996.*

Seminar on *'Village Planning Process for Chamba Block of Tehri Garhwal'* at Block Office, Chamba in collaboration with Tehri Zilla Panchayat, *5th July, 1996*.

`Release of Urban Environment Maps and Workshop on Urban Affairs – Shimla' in collaboration with Shimla Municipal Corporation and United States Agency for International Development (USAID) - *2nd & 3rd April, 1997.*

Conference on *`Climate Change and Communities in the Glacial Margins'* held at Reni-Lata Villages, Nandadevi Biosphere, in collaboration with Indian Network for Ethics and Climate Change (INECC), *May 14th –17th, 1997*

Field Meetings and District level Workshop on *Institutionalisation of Agro climatic Regional Planning in Tehri Garhwal District*, May 1997

Workshop on *Role of Van Panchayats in the Management of Forests in Uttarakhand*, in collaboration with Panchayat Sewa Samithi, Gairsain, 21st to 24th April, 1998.

National Workshop on *`Property Rights and Control over Natural Resources'* organized in collaboration with South-South Solidarity, 14th – 17th September, 1998 at Thano Forest Rest House, Dehradun

Workshop on *`Protected Areas of Uttarakhand'* and formation of Solidarity Group for People from Protected Areas; 19th to 21st March,1999.

Workshop on *`Agriculture in Uttarakhand'* in collaboration with AFPRO, Gwalior 28th and 29th May, 1999

Workshop on *Community Based Energy Planning for Palas Nyay Panchayat, Chamba Block, Tehri Garhwal* in collaboration with International Centre for Integrated Mountain Development; Chamba Block Panchayat and Uttarakhand Jan Jagriti Sansthan; at Jagriti Bhawan, Khadi

Doon IT Fair, Organised in collaboration with District Industries Centre, Dehradun; Development Commissioner, Uttaranchal and Academy for Management Studies; 16th October,1999

Group meeting and Field Expedition on Wireless in Local Loop for Rural Telephony in Surkanda Area, November, 1999.

Workshop on *Forest Workers of Uttarakhand* in collaboration with Panchayat Sewa Samithi and National Centre for Labour, Dehradun

Seminar on **'Uttaranchal: Creating the Future'**, discussions on options before the new state in collaboration with ONGC, HUDCO and UNAIDS. January 5th to 8th, 2001 Dehradun.

Launch Workshop on **'Urban Environmental Workbook for Indore'** in collaboration with IMC and Indo-US Fire Project, April 27th, 2001, Indore

Launch **Workshop on Cities for Climate Change Programme, ICLEI**, October, 2001 Kolkata

Climate Change and Mountain Communities, *'Climate change and ethics for a globalizing world'* convention commemorating the International Year of the Mountains, Ranichauri, 28th – 30th April, 2002

Mining Skill Share in Uttarakhand organised in collaboration with mm&P, July 2002, Dwarahat.

Public Consultation on Urban Environmental Workbook, 27th August, 2002, Indore

Communities and Climate Change, Parallel events during COP-VIII, October, 2002

Public Consultation on the State of Environment for Uttaranchal held at Gairsain, November 2004

Workshop on Tribal Rights, Gandhi Peace Foundation, New Delhi, December 2005

Workshop in Collaboration with Uttaranchal Council for Science and Technology on **"Water and Sanitation**" in Uttaranchal, Dehradun, March 2006

Water Testing during the Yamuna Satyagrah Yatra, June 5-15, 2008 along the left and right banks of River Yamuna

PEOPLE

Core Working Team

- Ramamurthi Sreedhar, Earth Scientist, Institutional Development
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- Saleem, Cartographer (Digital Cartography Intern)
- Yousuf Beg, Community Organisation
- Vijay Singh Chauhan, Mechanical and Hydro-power Installations
- Ravi Mittal, Field Studies and Administrative Interface
- Dr Ramesh Pant, Prof B.D.Nagchoudhuri Fellow on Environmental Management
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- Shashi Nandan, Office Management
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- Nikki Nirvikalpa, Film Maker, Circa Films
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- R.Ganesh, Microbiologist, Hyderabad
- Puneet Kishor, GIS and Community Commons Expert
- Debashis Bhattacharya, Corporate Value Management

Affiliate Networks & Membership

- mines, minerals and PEOPLE, mm&P (India)
- Mines and Communities, U.K
- MOUNTAIN FORUM
- IGPCCC
- IUCN (Commission on Environmental, Economic and Social Policy)
- Lawyers Initiative for Forest & Environment (LIFE)