Environment

Water & Environmental Sanitation Network (WES-Net India)

Solution Exchange for WES-Net India Consolidated Reply

Query: Integrated watershed approaches, from WASSAN, Hyderabad (Comparative Experiences).

Compiled by Preeti Soni, Resource Person and Moderator; additional research provided by Ramya Gopalan, Research Associate
15 January 2005

Original Query: M. V. Rama Chandrudu, WASSAN, Hyderabad

Posted: 29 December 2005

Dear Members,

I am working with WASSAN, a support organization associated with natural resource management projects in Andhra Pradesh and other states. We provide several capacity building services such as training, field support services, anchor resource center, policy advocacy and networking. We work with networks of CBOs, NGOs and state governments. Currently we are implementing a project that aims at “completely” developing a selected area (few hundreds of hectares) on watershed principles (which is also called saturating the area). In this context, I have the following query.

As you are aware, the GOI has been supporting the implementation of participatory micro watersheds projects covering 500 hectares since 1995. Most of the time these micro projects are allocated to scattered villages within the drought prone districts of the country. As the area development approach is confined to this small area in the selected villages, their impact is considered to be limited. On the other hand, there are experiences of developing water resources/bodies in a given large area (block, few thousand hectares of land etc.), but these are only "water focus" interventions (and are different from integrated approach of watershed - soil & moisture/ biomass, water, livestock and people's institutions, livelihoods/ productivity enhancement and so on). Experiences indicate that scattered micro watershed based approach (however integrated at micro level) has limited effectiveness.

My query to the Network members is; whether they have been involved in or know of projects (government/ bilateral/ NGO) that have attempted to address/develop a large area (few thousand hectares, as a compact block) in an integrated manner? In such cases, what have the experiences in terms of planning and institutional arrangements; and what have been the impacts of these projects vis-à-vis similar (small area) micro watershed projects?

Responses received with thanks from:

1. **Pranab R Choudhury, Independent Consultant, Bhubaneshwar**
2. **Jasveen Jairath, CapnetSA, Hyderabad**
3. **Shashidharan Enarth, Development Support Centre, Ahmedabad**
4. **Prabhjot Sodhi, UNDP GEF SGP, New Delhi**
5. **Mihir Maitra, India Canada Environment Facility (ICEF), New Delhi**
6. **P V Thomas, Indian Society of Agribusiness Professionals, New Delhi**
7. **M V Rama Chandrudu, WASSAN, Hyderabad (Response 1, Response 2, Response 3)**
8. **Veettal Kurian Baby, Socio-Economic Unit Foundation (SEUF), Kerala**

Further contributions are welcome!

Summary of Responses

Integrated Watershed Management involves sustainable management of resources and development options within a specified watershed. This query specifically seeks information and experiences regarding projects attempting to address or develop a large area in an integrated manner. The change from a scattered (involving mostly, micro watershed projects) to a more holistic (compact area) approach is an important issue, and member responses have clearly brought out the potential advantages accruing from a planned, large-area watershed management, while elucidating the important issues (including constraints) that are associated with such an approach.

Member responses point out that there are experiences of holistic watershed management (involving very large areas) relating to river basins in India; however, these constitute a rather small number. Members have shared useful information about other projects that have been attempted on a fairly large scale, including projects in Orissa, Madhya Pradesh and Rajasthan. These projects highlight the adoption of either different **institutional**, **technological** and **participatory approaches,** or portray a varying focus when these approaches are used in tandem. In **Orissa**, for instance, the Integrated Watershed Development Project (Plains) and the Indo-Danish Comprehensive Watershed Development Project (IDCWDP) are integrated projects which entail multidisciplinary natural resource management interventions combined with community mobilization and participation. Similarly, the example of the Environment Improvement in Rainfed Areas in **Madhya Pradesh** enumerates the adoption of a community-based process, wherein the local capacity is built so as to ensure continuity in the process initiated by the project. The technological and institutional aspects are highlighted in the **Rajasthan** example which emphasizes the use of the Johad technology – a beneficial locally initiated traditional technology, and emphasizes on the working of institutional processes. In view of this, the treatment area of the project was demarcated on the basis of river catchment area rather than being determined on the basis of village boundaries. In contrast, an example in the districts of **Western India** emphasizes the effectiveness of creating institutional processes - taking village as the base rather than a watershed.

Members also mentioned that the issue involved in choosing between micro/mini/macro watershed management approaches was not only of **scale** but also of its "**integration**" with diverse and often conflicting community interests; more importantly, of ensuring equitable benefits to the weaker/marginalized segments of the community. The large area integrated watershed management approach, though an effective tool for improving natural resource based livelihoods, it may have limitations on how much it can address the larger and complex issues of **equity** (ownership and access), and **social inclusion** (and social structures such as castes) etc.

- as these are impinged upon by **political** (power structure and relations), **demographic** (population) and **governance** factors. The benefits experienced in several instances have also indicated that watershed approaches have visible and effective impact in terms of area development, livelihood generation, productivity enhancement, fertility improvement of soil, moisture conservation and over all improvement in the quality of life. However, it may be noted that the benefits are conditional upon the framework, strategy & implementation of the approach and are not universal to all watershed approaches. Some other considerations that are highlighted by the respondents include issues relating to implementation of government's guidelines, capacity of the implementing agency, information and knowledge base regarding natural resources of the partners involved in the project/plan, and institutional inefficiencies (in addressing riparian issues, inequity, water rights etc.).

The comparative experiences shared by members are further discussed below, highlighting the context-specific nature of integrated watershed approaches, and presenting a variety of aspects that require due consideration.

Comparative Experiences

Projects in Orissa *(From Pranab R Choudhury, Independent Consultant, Bhubaneshwar)*

- **Integrated Watershed Development (Plains) Project in erstwhile Phulbani and Ganjam districts:** This project, sponsored by World Bank in early 1990s, aimed to introduce sustainable land management practices in selected watersheds. It also helped develop institutional arrangements for greater inter-agency coordination in watershed planning and implementation. The targeted area was more than 500 ha, and integrated with multidisciplinary natural resource management (NRM) interventions and community mobilization. It also conducted impact evaluation particularly yield gains and environmental impact. Individual studies at specific locations show significant benefits in the improvement of natural resources and agricultural yields. For more details see, Learning from Experience in India's Watersheds
- **Indo-Danish Comprehensive Watershed Development Project (IDCWDP) in Koraput and Malkangiri districts**: This DANIDA sponsored project was initiated in 1992, to help poor and rural communities improve their living conditions without deteriorating the natural resource base in the targeted area of more than 500 ha. Based on PRA exercises and pre-project findings, direct and indirect beneficiaries were identified. Additionally the project also benefited government officers, staff of the voluntary organization involved, village youth facilitators and rural labourers. For details see, Indo-Danish Comprehensive Watershed Development Project (IDCWDP)
- **Machhkund River Valley Project:** A catchment treatment programme implemented in the 1950s-1960s was a pioneering initiative. The soil conservation scheme in Machkund basin (750 sq km) was taken up to reduce silt flow into Jalaput reservoir and to persuade Adivasis to adopt permanent agriculture. Three watershed management units of 10,000 acres each were started, where contour bunding, tree planting and conservation farming were taken together. Grassed waterway system has been evolved in this area as a new idea of soil conservation on the recommendation of experts of the Technical Cooperation Mission.

Projects in Orissa and Madhya Pradesh *(From Mihir Maitra, ICEF, New Delhi)*

Experience was shared from two five-year projects, which are typical watershed projects but have chosen to ignore a perfect watershed boundary. The two projects were located in:

- **Orissa**: This project was implemented with PRADAN s involvement in 20 villages. It had Village Environment Committees (a typical CBO) and a number of SHGs formed. The physical

impact of the project was good, and it finally landed up in forming a district Federation to manage a Revolving Fund for sustainability.

- **Chhindwara, Madhya Pradesh**: This EIRA (Environmental Improvement in Rainfed Areas) project was implemented in 30 villages. The project plans that each SHGs will manage their own affairs and be sustainable as far as possible. For details see Environment Improvement in Rainfed Areas.

Integrated Wasteland Development Program (IWDP) *(From Shashidharan Enarth, Development Support Centre, Ahmedabad, and P V Thomas, New Delhi)*
This Central Government Program aimed at improving productivity of waste lands in the country and living standards of the owners of these lands. As wasteland development is taken up on watershed basis, it had provisions for watershed development. Besides planning and execution of the watershed projects, the local people are involved in maintaining and managing the projects through a special provision in the form of Watershed Development Fund. The watershed activities envisaged the benefits of improved productivity, increased availability of fuel wood, fodder and water, reduced migration from rural areas and overall improvement in the economic status of the rural people. Evaluation studies were also conducted by the Ministry of Rural Development through independent research institutes that address different dimensions of the program. For details see, Integrated Wasteland Development Program (IWDP), for additional details.

Alwar district, Rajasthan *(From Shashidharan Enarth, Development Support Centre, Ahmedabad)*
The groundwater crisis along with growing competition at the micro level pertaining to inter-sectoral water use has led to a severe situation in the district. In this context, the people of the district revived the traditional watershed technology "Johad", to restore the ecological balance of the region. This local initiative was more rewarding than conventional watershed approaches and the "Johad Watershed" development by Tarun Bharat Sangh was considered significant.

Western India *(From Prabhjot Sodhi, UNDP GEF SGP, New Delhi)*
This DFID funded program implemented in the tribal parts of Dahod, Jhabna, Ratlam and Banswara districts in 3 western states focused approach wherein institutional/social processes were effectively based in a village rather than a watershed. A cluster of 4-6 villages (mini watershed) were formed, and the ripple effects of the development/social processes between these clusters enabled sharing of skills and knowledge to mutually address problems. A 3- pronge strategy was adopted to develop a sustainable model – participatory process, small self-help group leading to federation approach, and developing locals as "Jankars" or community para-workers to acquire skills so as to take the project forward and build local community ownerships.

Pilot projects, India's tribal (adivasi) belt *(From Preeti Soni, Resource Person)*
Four pilot watershed projects (Nakna in Chhatgisgarh, Nayagaon in Rajasthan, Karaighat in UP and Dundlu in West Bengal) were selected for learning watershed development process and forming guidelines relating to institutional arrangements and technical requirements with a requisite information base. These projects representative of the broader geographic, agro-climatic and socioeconomic situations are at different stages of development with two progressing well and the other two not so well. Lessons learned from these pilots include the need for community participation, systematic procedures, socioeconomic, physical & hydrological information and also an emphasis on capacity building of village institutions. For detailed information see, Biophysical and Institutional Factors in Watershed Management

Mekong River Basin *(From Veettal Kurian Baby, Socio-Economic Unit Foundation, Kerala)*
An example of intergovernmental macro management is an integrated and participatory approach to watershed management adopted throughout Lower Mekong Basin to address its multi-faceted

functions. The basin is an important source of livelihood, and its resources were getting degraded due to unsustainable practices. An analysis of the Mekong River Commission's Strategic Plan 2001-2005 reveals a high degree of accord between the priorities set forth therein and important traits of the relevant concepts and guidelines prescribed. For further details please see, Watershed Management in the Lower Mekong Basin.

Related Resources

Recommended Organizations

Orissa State Soil Conservation Department *(from Pranab R Choudhury, Independent Consultant, Bhubaneshwar)*

For further information & evaluation reports on Integrated Watershed Developement Project (Plains) implemented in Phulbani & Ganjam districts in the early nineties.

Danida's Watershed Development Programme *(Identified by Pranab R Choudhury, Independent Consultant, Bhubaneshwar)*
http://www.danwadepindia.com/projects/index.asp

Recommended for involvement in various watershed projects particularly in the states of Karnataka, Tamil Nadu, Orissa & Madhya Pradesh

Council for Advancement of People's Action and Rural Technology (CAPART) *(From Shashidharan Enarth, Development Support Centre, Ahmedabad)*
http://capart.nic.in/

The Watershed Development Division works towards integrated micro watershed development in rural areas

Tarun Bharat Sangh *(From Shashidharan Enarth, Development Support Centre, Ahmedabad)*
http://www.tarunbharatsangh.org/publications/johad-undp

This NGO is recommended for its experience in watershed projects particularly the Alwar District Initiative

From Veettal Kurian Baby, Socio-Economic Unit Foundation (SEUF), Kerala

International Atomic Energy Agency (IAEA)
www.iaea.org

Development of certain point recharges technologies in aquifer management to facilitate cost effective intervention and informed resource management

International Water Management Institute (IWMI), Colombo
http://www.iwmi.cgiar.org/southasia/index.asp?nc=7595&id=662&msid=121

Recommended for work in institutional modeling for river basin management

Recommended Contacts

K S Sandhu *(From Prabhjot Sodhi, UNDP GEF SGP, New Delhi)*
Gramin Vikas Trust (GVT) and KRIBHCO Bhopal

Recommended as the contact person for the DFID funded program in Western India

Recommended Documentation

Indo-Danish Comprehensive Watershed Development Project (IDCWDP) *(from Pranab R Choudhury, Independent Consultant, Bhubaneshwar)*
http://www.danwadepindia.com/projects/cwdpor.asp

Recommended for further information on the DANIDA sponsored IDCWDP implemented in Koraput and Malakangiri districts of Orissa during 1994-2003

Water Resource Assessment and Management in Himalayan Catchments through Remote Sensing and GIS Technology *(From Veettal Kurian Baby, Socio-Economic Unit Foundation (SEUF), Kerala)*
http://www.gisdevelopment.net/application/nrm/water/watershed/watws0014.htm

To learn from experiences in the Himalayan catchments through the application of GIS and remote sensing as a decision support tool

Additional documentation recommended by Preeti Soni, Resource Person

Jhanwar Watershed Project, India
http://www.unep.org/desertification/successstories/17.htm

Provides key features and highlights including achievements of the watershed project in Jhanwar in Western Rajasthan

Environment Improvement in Rainfed Areas (EIRA)
http://www.icefindia.org/eira-detail.htm available at India-Canada Environment Facility (ICEF) website www.icefindia.org

Provides details of the EIRA that involved watershed development in 30 villages in Chhindwara in Madhya Pradesh

Biophysical and Institutional Factors in Watershed Management
Sakthivadivel R, K Bhattacharya and C Scott. IWMI (2004)
http://www.iwmi.cgiar.org/pubs/working/WOR88.pdf (PDF 546 KB) available at the IWMI website http://www.iwmi.cgiar.org/

The paper discusses four pilot projects implemented in watersheds in India's tribal belt and provides recommendations

Sustainable Watershed Management in the Lower Mekong Basin
http://www2.gtz.de/vietnam/projects/projects_rural_mekong_eng.htm available at GTZ Vietnam website http://www2.gtz.de/vietnam/index.htm

The project brief describes the of the Mekong River Commission (MRC) and GTZ Cooperation Programme for Lower Mekong Basin watershed management project.

Additional documentation recommended by Ramya Gopalan, Research Associate

Learning from Experience in India's Watersheds
http://lnweb18.worldbank.org/sar/sa.nsf/Attachments/watershed/$File/watershed.pdf (Size: 318 KB)

Recommended for further details on the Integrated Watershed Development (Plains) Project as well as additional case studies in watershed development

Integrated Wasteland Development Program (IWDP)
http://angul.nic.in/iwdp.htm

Provides a project brief of the IWDP as well as financial details of the project

Watershed Management in the Lower Mekong Basin, Appraisal Report
F.E. Brandl, S. Preuss and F. Rock, Watershed Management Project (WSMP), MRC-GTZ Cooperation Program, 2002, subscription required (free), abstract available at,
http://www.mekonginfo.org/mrc_en/doclib.nsf/0/a9f1e3b23e23a97047256f690009653e

An appraisal of the Mekong River Commission's undertaking of an integrated approach to watershed management in this basin

Recommended Websites

IWRM Tool Box *(From Veettal Kurian Baby, Socio-Economic Unit Foundation (SEUF), Kerala)*
Global Water Partnership (GWP), 2003, available at,
http://www.gwptoolbox.org/en/index.html

Draws together global experiences and knowledge in implementation including institutional and governance aspects

Mekong River Commission For Sustainable Development (MRC) *(from Preeti Soni, Resource Person)*
http://www.mrcmekong.org/index.htm

The MRC website contains resources and information on cooperation for resource management in Lower Mekong Basin including on the Watershed Management Project

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Responses in Full

Pranab R Choudhury, Independent Consultant, Bhubaneshwar

There are two such examples in Orissa. One is Integrated Watershed Developement Project (Plains) sponsored by World Bank and implemented in erstwhile Phulbani and Ganjam districts in early nineties. Another is DANIDA sponsored IDCWDP implemented in Koraput and Malakangiri districts of Orissa during 1994-2003 (http://www.danwadepindia.com/projects/cwdpor.asp). In both the projects, the area targeted was higher than the area of around 500 ha being taken up under micro-watershed approach recently. Both these projects were integrated projects with multidisciplinary NRM interventions and different degrees of participation and community mobilization. You can contact Orissa State Soil Conservation Department to get further information and evaluation reports.

Another example, which was quite an old one, much before the era of participatory and multi-disciplinary NRM, was the Machhkund River Valley Project implemented in late fifties and early sixties in Orissa. Basically a catchment treament programme, Machhkund experiment was a pioneering intiative in the history of soil conservation programes in India. The soil conservation scheme in Machkund basin (750 sq km) was taken up in 1956 with an objective to reduce silt flow into Jalaput reservoir and to persuade Adivasis to adopt permanent agriculture. It was a five pronged strategy with contour bunding (27,988 acres), plantation of economically important trees like cashew, bamboo and silver oak (11,000 acres), agave plantation (220 acres), coffee plantation & bench terracing (30 acres). Three watershed management units of 10,000 acres each started in 1959, where contour bunding, tree planting and conservation farming taken together. Grassed waterway system has been evolved in this area as a new idea of soil conservation on the recommendation of experts of the Technical Cooperation Mission. Many of the legacies of this experiment, continue to serve the landscapes and livelihoods in Koraput today.

Jasveen Jairath, CapnetSA, Hyderabad

Ramachandrudu has raised a very pertinent point changing from piecemeal and scattered "project" approach to more holistic intervention strategy. Issues however are not only of scale or "integration". Any "integrated" intervention will also entail impinging on existing exploitative power relations that deny access of benefits to the poor/marginalized. These unbalanced relations of power tend to be institutionally embedded. Any developmental intervention that upsets existing privileges will call forth its own reaction to stall the intervention or it will be appropriated by the already privileged classes.

In this context how to ensure that watershed and all other developmental interventions overcome this barrier of differential access to proposed benefits - remains the key challenge. Can some one also throw light on how the challenge of poor people's empowerment was handled through integrated watershed or other similar interventions?

Shashidharan Enarth, Development Support Centre, Ahmedabad

CAPART's watershed guidelines had 1000 ha as the limit. Another programme that pre-dates GOI's watershed guidelines is the Integrated Wasteland Development Programme (IWDP). Despite the name "wasteland" the programme had provisions for all the interventions that WSD guidelines encouraged. I am not sure if they had any limit. It may be worthwhile to examine some of the projects implemented under these two schemes.

The other potential site for lessons is the work done by Tarun Bharat Sangh. Ramchandrudu may want to recollect the trip that he and some farmer-leaders made to TBS project many years ago. Many of the project villages were bound by the need to converge (at least by design) to fit into the plan where the treatment area was demarcated by river-catchment area and riparian considerations rather than politcal village boundaries. Did the convergence work from technology point of view? From people's institution point-of view? And from equity point of view?

Capping area of a watershed, no matter how small or large the unit is, is in a way a comical antithesis of the definition of a watershed. Sadly, the dilution of watershed concept is not limited to the area problem alone. We have seen that the "ridge-to-valley" approach defies most well planned social organizing processes, It will be interesting to find out how many micro-watershed projects have infact gone exactly the opposite way --- started with a percolation tank or check dam (the most coveted activity) and ended with upland wasteland treatment (the most vexing activity). I know dozens of them. As mcuh as we would like to adhere to the right method (technological and institutional), it is often the second best option that works.

Prabhjot Sodhi, UNDP GEF SGP, New Delhi

Hello, lovely to hear from you in the very beginning of the New Year 2006 on very strategic issues and we all have had experiences on many of these issues.

I was involved myself with a DFID funded program in Western India tribal parts of Dahod, Jhabna, Ratlam and Banswara districts-in 3 states. The name of the organization was Gramin

Vikas Trust (GVT) supported through KRIBHCO. The present in-charge is (Mr.K.S.Sandhu-94250 10763) who is based in Bhopal.

Now in this project we focused onto a mini/macro watershed concept/approach. We learnt that the communities considered/defined their village as their development unit. They more so agreed to creating institutional/social processes more effectively in a village base rather than a watershed mini/micro for it was village which binded them into a unit.

Therefore we had 4-6 villages forming a cluster (mini watershed) which nearly had a fit to the national guidelines also. Each of these cluster's (4-6 villages, in an area of nearly 3000 hectares plus) were not but were 5-7 to 10-20 Kms apart, deliberating kept so as to have the ripple effects on the development/social processes from one to the other, sharing of skills, knowledge between people and communities to mutually address their problems. It succeeded. Many people over time shared, built networks, found easy access, through village based cluster approach. In the project in each district we had nearly 5-7 clusters thus addressing an area of nearly 25,000 hectares in 4 districts.

Now we did not have a different approach for the clusters/ villages across the three states. Through the implementation over time the approach was a bit routinised. In order to overcome the mechanical way of functioning it was important to have the planning at the village levels. **A three pronged strategy** was adopted to develop a sustainable model.

1. A participatory process approach through the use of PRA's etc. in prioritizing the needs of the communities and developing a ***village work plan for the next 5 years***. Thus village work plan, outlined what activities shall be undertaken in year 1 and what in year 2.....and who shall share what in terms of resources-funds, decisions, roles and responsibilities. The activities were basically divided in 2 categories known as *simple* (those actions which demand less funds, small time periods, produce quick results and less links) and *complex* (all those actions which were spread more in terms of funds, time periods, demand greater links, more stakeholders etc.)

2. Small Self-Help Group- leading to federation approach. SHGs based on kinship, common-interest and other common sharing of trade, migratory groups, informal groups. The idea was no works shall be undertaken unless the communities were involved as members of these SHGs. These credit and savings groups helped the local women and male members in meeting their credit needs on easy terms and came out of the clutches of the local money lenders....also they felt great confidence in seeing themselves as managing resources, linking to banks for many (nearly more than 90% opened accounts in bank first time and visited the bank first time

3. Creating and developing locals as "Jankars" or community para-workers to acquire skills, awareness, confidence and technical back-ups so as to take the project forward and build local community ownerships. all the related works on the SWC and the minor irrigation projects ie small check dams, lift irrigation schemes were all taken through the SHGs and all the persons were paid equal wages on the volume basis.

There were many lessons on the same and I shall share the same shortly with the team. Is this what you are looking for, on what and how we did it...great success but it cannot be explained in few words...

Mihir Maitra, India Canada Environment Facility (ICEF), New Delhi

The question asked by you, as I understand, is what are the differences particularly in institutional arrangements and impacts between larger, water focused watershed and micro (saturated) livelihood oriented watershed projects.

The search for ideal size as you would recall came from the All India Soil and Land Use Survey's (AISLUS) effort in numbering all the watersheds in the country. Finally, it was settled that less than 1000 ha is micro, 1000-3000 ha is mini and 3000 – 5000 ha is large etc. This, of course is not sacrosanct. RD guidelines suggested 500 ha size but also suggested that an Implementing Agency (IA) can take as many as 10 such Watersheds (WS).

The manageable size would depend on a) the capacity of the IA and b) the approach adopted i.e water focused or saturating approach. Broadly, there are two kinds of players. One prefers to focus on Soil & Water conservation and do not mind adding on the livelihood issues as far as possible (e.g MoAC). The others begin with livelihood improvement projects and eventually land squarely on Natural Resource Management (NRM)/Watershed Management (WSM) projects.

I am aware of two 5 year projects dealing with 20 villages (PRADAN in Orissa) and 30 villages (EIRA in Chhindwara) respectively. These are typical WSD projects but have chosen to ignore a perfect watershed boundary. To my mind WS boundary should not be a limiting factor if the project has a livelihood focus. The first project had Village Environment Committees (a typical CBO) and a number of SHGs formed. The physical impact was good. This project finally landed up in forming a district Federation to manage a Revolving Fund for sustainability. The second project plans that each SHGs will manage their own affairs and be sustainable as far as possible. MYRADA project also has a well talked about model on sustaining SHGs..

The search for up-scaling successful WSM experiences in the country is still on. I feel that the DRDA – ZP – PRI – NGO model needs to be tried more vigorously with some policy changes. Besides, one should remember that while horizontally integrated, community based WSD project is a very effective tool in improving NR based rural livelihood, it has limitations on how much it can address the larger social (cast), political (power structure), equity (ownership), demographic (population), Governance issues. But it (IWSD) is the most productive and peaceful route. While up-scaling, one has also to make a choice between quality and quantity. My personal view is that while due attention be given to the process, but the products (Results) can not be ignored.

P V Thomas, Indian Society of Agribusiness Professionals, New Delhi

It appears that there is a lot of information gap in understanding the current approach being adopted by the GOI for area development programmes and in particular Water Shed Development although Micro Water Shed approach was in vogue w.e.f. 1995. In April, 1999 the Department of Land Resources was created to act as a Nodal Agency for land resource management. This has been done to develop and promote sustainable and productive land use system and to protect critical resources and eco systems through balancing land, water and other resources use providing a basis for negotiation, participatory decision making and conflict resolution among stake holders, as well as providing and enabling political, social and economic environment.

The department of land resources has adopted a project based, ridge to valley approach for in-situ soil and water conservation, afforestation etc. in the implementation of the programme. Accordingly the guidelines for watershed development was revised in September, 2001 which envisages greater flexibility, focussed role for Panchyati Raj Institutions, twin track approach, exit protocol, greater community participation in project implementation, post project

maintenance etc. through SHGs comprising SCs/ STs, women, landless labourers and rural artisans. The salient feature of the guidelines includes focus on village common land, equity in sharing the benefits, institutionalised community participation for implementation and maintenance and, more importantly, the emphases on sustainable rural livelihood support system through SHGs and User Groups. According to Hariyali guidelines, launched in January, 2003 all area development programmes would be implemented through the PRIs.

Coverage under the Integrated Waste Land Development Programme (IWDP) extends generally to blocks that are not covered under Desert Development Programme (DDP) and Drought Prone Areas Programme (DPAP). It is important to note that at present 972 blocks in 182 districts are covered under DPAP and 235 blocks in 40 districts are covered under DDP. Thus it may be seen that area development programmes are implemented not in selected villages but in clearly identified blocks. And the IWDP, in fact, adopted an integrated approach of not only water but also soil and moisture conservation, livestock and people's institution, livelihood, production enhancement and so on. Several evaluation studies conducted by the Ministry of Rural Development (MoRD) through independent research institutions have shown that the water shed approach had very visible and effective impact in terms of area development, livelihood generation, productivity enhancement, fertility improvement of soil, moisture conservation and over all improvement in the quality of life. However these findings are not universely applicable in all watersheds and there are several shortcoming and problem areas. The evaluation reports are available State-wise and District-wise and this could throw further light into various dimensions of this issue.

M V Rama Chandrudu, WASSAN, Hyderabad (Response 1)

Thanks for the responses to my query. I would like the respondents to share the experiences of developing large compact area in an integrated manner.

Mr Shashidharan's Response on Tarun Bharat Experience:
My limited understanding of this experience tells me that this is largely a water resource development project, which produced impressive results over a period of time. I do not know if this is a "planned" program either. There may be efforts to develop other resources (forests/ land/ livestock) in these villages, but I am not sure how integrated and planned these interventions are.

Mr Thomas's Response:
The policy framework of Guidelines (1995 and 2001) is fairly clear to many of us. But the issue is their implementation. These Guidelines also talk about 5000 hect (a manageable size for a Project Implementation Agency) as a unit. But this 5000 hect are not in one block in majority of cases (my hunch is not even one block has total of 5000 hect in India. Please correct me if I am wrong). All the micro projects (500 hect each) are scattered all over and a PIA is made responsible for 5000 hect (if the PIA is lucky).

Dr Jasveen's Response:
I am trying to understand the implications of large area on project design and implementation. It is good to know how equity issues are integrated in this approach.

Veettal Kurian Baby, Socio-Economic Unit Foundation (SEUF), Kerala

In India integrated and holistic watershed management on the basis of river basins are very few. There needs greater understanding about the dynamics of interrelations among various natural resources and their inter-linkages with livelihood of the stakeholders. Many a times, the failure of watershed development could be inter alia attributed to the maladjustments with the diverse facets of nature, due to poor awareness of the natural resources among various partners. Yet another reason being the fragmented administrative and institutional framework. Efforts have been done of course in many parts of the country, particularly in the Khandi region with the World Bank support, in AP, Rajasthan and elsewhere. Rajendra Singh, the waterman of India and his Tarun Bharat Sangh have created excellent best practices of local initiatives. However, the institutional inefficiencies in addressing riparian issues, inequity, water rights etc., still defy viable solutions. As long as water rights are linked to property rights even well conceived local initiatives in water sharing is often defeated by dominant interests. It is also found that, institutionalization process suffer seriously on account of lack of well coordinated and synthesized information. It would be worthwhile to learn from the experiences in the Himalayan catchments through the application of GIS and remote sensing as decision support tool (Water Resource Assessment and Management in Himalayan Catchments through Remote Sensing and GIS Technology (Map Asia 2002). It is also learned that the International Atomic Energy Agency (IAEA) has developed certain point recharge technologies in aquifer management which could facilitate cost effective intervention and informed resource management. The IWRM Tool Box (2003) developed by the Global Water Partnership (GWP) is a comprehensive source of knowledge, experience, guidance for sustainable resource development and management. It draws together global experiences/case studies and share knowledge in implementation including institutional and governance aspects. The International Water Management Institute (IWMI) Colombo, Sri Lanka has done commendable work in institutional modeling for river basin management. The lessons from Mekong River basin (800,000 sq. kms and a length of 4200 kms), and the experiences of Israel (mainly in aquifer management) are cases of successful management at a macro level.

M V Rama Chandrudu, WASSAN, Hyderabad (Response 2). In reply to Mihir Maitra's response.

I would like to know the experiences of PRADAN which implemented the watershed projects in 20 village/ EIRA experiences. Are these projects/ villages make a compact block or scattered? If they are compact, their experience would be relevant to my query. All those points you mentioned are relevant.

M V Rama Chandrudu, WASSAN, Hyderabad (Response 3). In reply to Prabhjot Sodhi's response.

I am certainly looking for such experiences, which looked at compact area of reasonable size (3000 hect fits the case) and developed in an integrated manner. The issues/ questions for learning are --

1. How the plans are prepared for all villages in the compact area? What processes were followed in terms of technology choice and negotiations and institutional aspects?
2. What could be the budget - unit cost, what are the synergies and disadvantages of such a scale?
3. What kind of regulations are needed for sustainable resource use?

I am sure the experiences of GVT teach several lessons, though it is difficult to say in few words, as you mentioned.

Many thanks to all who contributed to this query!

If you have further information to share on this topic, please send it to Solution Exchange for WES-Net at se-wes@groups.solutionexchange-un.net.in with the subject heading "Re: [se-wes] Query: Integrated watershed approaches, from WASSAN,Hyderabad (Comparative Experiences). Additional Response".