



The historic Sardar Sarovar Project (SSP) on the Narmada river is ready for 'running in' as the first 80,000 ha of its 1.8 million ha planned command area prepares for receiving irrigation. Mired in controversy, the SSP has planned for high operational efficiency with user participation. It has announced high user fees, registered more than 800 water user associations, and enjoined them to build their own distribution systems while the project has built '*pucca*' (lined) canals up to each village service area.

The reality is however more complex. While WUAs' have been registered, few are actually functional and not many are prepared to collect water fees on behalf of SSP. None of the villages has built a distribution system; instead, thousands of diesel pumps are likely to get pressed into service to convey water through rubber pipes. All in all, rather than orderly water distribution and fee collection, SSP is likely to witness a chaotic free-for-all. Is this cause for great concern? Not necessarily, if SSP can improvise on the apparent chaos rather than insist

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Comment

Framing the Rules of the Game: Preparing for the first irrigation season in The Sardar Sarovar Project

Tushaar Shah

Based on Research by
IWMI-Tata Research Team

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Framing the Rules of the Game: Preparing for the First Irrigation Season in Sardar Sarovar Project¹

RESEARCH HIGHLIGHT BASED ON A FIELDWORK BY IWMI-TATA RESEARCH TEAM IN FORTY VILLAGES OF FIRST PHASE COMMAND OF SARDAR SAROVAR PROJECT

BACKDROP

Thirty years in planning, over fifteen years in construction and some Rs15000 crore of investment later, the Sardar Sarovar (Narmada) Project's (SSP) vision is now ready to unfold. When fully commissioned, the Project will use 5600 km of main and branch canals and 66,000 km of distribution network (including distributaries and minors) to deliver 9.8 km³ of irrigation water to 1.8 million ha of land. Besides, the SSP is also expected to make a major dent in the rural and urban drinking water needs of the state as also help recharge groundwater aquifers in intensively groundwater-irrigated areas of North Gujarat and Saurashtra. If all these targets are fully or even substantially met, SSP will indeed prove to be the life line of Gujarat. And this will happen if its operational strategy that is, key assumptions made during the planning phase about its manner of operation – holds. The Sardar Sarovar Project's operational strategy will be put to test in rabi 2002, and the key elements of this strategy are as follows:

1. The project will create a distribution infrastructure such that each village has one or more *pucca* (lined) minors depending upon the size of its culturable command area (CCA); the distribution system below the minor including lined sub-minors, delivering water to 40-60 ha chaks, and field channels further down to serve 5-8 ha sub-

chaks will be created by the irrigation community.

The thinking, presumably, is that by involving the irrigation community in the design and creation of distribution infrastructure below the minor, the Project is not only inviting genuine partnership with the community but also provides an organizing logic for water user associations.

2. The irrigation community in each minor (serving a village service area) will form a water user association whose responsibility will be to: [a] mobilize community labour and resources to create the water distribution system below the minor; [b] arrange orderly distribution of irrigation water within the command; [c] ensure future maintenance and upkeep of the distribution system below the minor while the canal infrastructure up to the minor level is maintained and operated by the SSP; and [d] collect water fee @ Rs. 157/irrigation/ha, of which Rs. 7 will go back to the WUA as subsidy to meet administrative expenses.



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The idea is that participatory irrigation management (PIM) in SSP starts at the beginning, rather than come mid-stream when system managers have taken all crucial design decisions.

3. The project will provide only 21” delta of water in five irrigations during the rabi season; no summer irrigation is envisaged, nor is it envisaged that Narmada water will be used to raise perennial, water intensive crops like sugarcane and banana; SSP's idea is to cover large areas through extensive irrigation rather than supporting a small, intensively irrigated command. The logic of rationing water is to stem at the outset the propensity of early command areas at the head of the system to form the habit of water intensive agriculture.
4. SSP's primary responsibility will be the upkeep of the infrastructure up to the minor level, and timely delivery of water on volumetric basis to each minor based on irrigation indents from each WUA which will collect and aggregate indents from individual farmers in the command. That done, it is expected that WUAs will take over. SSP will not consider water indents by individual farmers unless these are routed through the WUA. This will hopefully result in division of O & M responsibility and costs in which the project takes the responsibility of those parts of O & M that require technical and engineering competence of a high order whereas WUAs will operate and maintain local infrastructure where knowledge of local conditions is critical.
5. The system is planned for sophisticated, computerized water control from control rooms strewn across the branches and distributaries throughout the command; while the control rooms are ready, the water control infrastructure will take a long time to install and commission. As a result, for several years, volumetric water control will be operated manually, if at all. The basic idea

is to introduce volumetric delivery and charge at all levels right from the beginning.

As visions and strategies go, the early years of the operation of SSP will be critical-- they will decide whether the project will run by the original vision outlined above, or by a new evolutionary operational framework comparable or even superior to the original vision, or regress into an operational mode in which the SSP will follow the footsteps of other major irrigation projects where achievements on all counts have fallen far short of expectations.

RUNNING IN

Registering WUAs as co-operatives is quite different from catalysing functional WUAs that begin to undertake all the tasks they are expected to perform. Thus between September and November of 2002, the critical challenge facing SSP is to activate and energize the 800 odd minor level WUAs so that the first irrigation season is managed according to the SSP vision.

The SSP is now poised at a crucial juncture. Like a new engine being run in, SSP too is getting ready to be 'run in' as it plans, in rabi 2002, to release irrigation to some 80,000 ha of its command in Narmada, Bharuch, and Vadodara districts where canal and distribution infrastructure up to minor level is fully or partially ready. While the full reservoir capacity is likely to be created once the dam height is raised to 135 m by 2003, it will take 10-15 years before the canal network gets constructed to cover the entire command area of the project. Until then, SSP will gradually evolve, adding new areas in its irrigated command every year. In this process of evolution, the experience of these formative years will prove decisive in three ways: [a] system managers as well as users' behaviour and practices in the first years will take the shape of habits, which will be difficult and painful to change later; [b] the behaviour, practices, and habits allowed to form in early parts of the command will define the norms, rules, behavior and habits in new areas being brought

under the command as the project evolves; and [c] the early years will decide whether the actual operational framework of the Project is faithful to the original vision or whether it is superior, comparable or inferior to it.

SSP field staff has already done some amount of WUA organizing work in 670 villages encompassing the first year command of 80,000 ha. Typically, a group of 11 leading, forward looking farmers, generally representing all or most of the chaks constituting the command area in each minor (some times, more than one minor), are formed to a management committee of WUA. They also act as promoters, with one of the members nominated as (often cajoled to become) the president. Applications have been filed for the registration of over 800 WUAs as cooperatives under the Cooperative Act. However, registering WUAs as cooperatives is quite different from catalyzing functional WUAs that begin to undertake all the tasks they are expected to perform. Thus between September and November of 2002, the critical challenge facing SSP is to activate and energize the 800 odd minor level WUAs so that the first irrigation season is managed according to the SSP vision. The IWMI-Tata Water Policy Program (ITP) was invited to work with the SSP to [a] develop a road map of things the project can do to achieve this aim or [b] evolve a fall-back plan.



IMPRESSIONS FROM THE FIELDWORK

All the nine researchers of the ITP worked together with the field staff and engineers of SSP; they formed into four teams to visit and interact with irrigators' groups in some 40 villages spread over the entire command of 80,000 ha to get a first-hand view of the preparedness of the irrigation communities to receive and utilize Narmada water. Field interactions were designed to achieve five outcomes:

1. A quick situation analysis of the conditions in each village covered including the size of farm land, number of irrigators, socio-economic structure, cropping pattern, existing irrigation sources, farm productivity etc.
2. Assessment of the preparedness of the irrigation groups to receive Narmada water and arrange for their orderly distribution;
3. Assessing the level of user comfort with SSP water pricing (which is higher compared to government water pricing in all other surface irrigation systems) and the mode of collection of water fees and its reimbursement to SSP;
4. The general state of the WUA, its internal dynamic, public awareness about its existence, functions, and future role;
5. An assessment of the likelihood of the SSP vision (outlined in the last section) playing out in the first irrigation season; and developing a prognosis of what might happen if it does not.

The general situation in the 40 villages covered by our fieldwork was highly variable. Some villages near Kevadia Colony, near the head of the system, have had a small area irrigated by Narmada water on a trial basis; some more areas in Bharuch district too received surface irrigation from small and medium irrigation projects, such as the Deo project. Barring these small patches, the entire command will receive canal irrigation for the first time. However, even villages which have had canal irrigation have no experience of farmer management of water distribution. In Devalia and

Madhodar Minors, where the sub-minors too were constructed by SSP under a pilot, WUAs were formed some three years ago and were supposed to manage water distribution and revenue collection. However, in reality, water rotation roster is given to them by SSP officials and the WUA has done little of its own rule-making.

Each of the 80,000 ha will produce at least Rs 8-10,000 in incremental value added thanks to Narmada; and the cost of Narmada irrigation will be less than 10 percent of this increased value added.

Moreover, whereas in Mahi and Ukai-Kakarapar commands, we find vibrant farmer organizations like dairy and sugar cooperatives, the villages we visited have virtually no experience in successful farmer organizations at local level. If anything, people have bitter memories of all manner of co-operatives that have either swindled them or become defunct.

Groundwater irrigation is fairly well developed in some parts but absent in other areas, such as in Bharuch. Tank irrigation – by gravity flow and through lift irrigation with diesel pumps and rubber pipes – however is common. Near Jambusar where large tracts suffer from primary salinity, agriculture is underdeveloped and careful application of surface irrigation can boost the economy. Unlike the command areas of Ukai-Kakarapar, Mahi, and other canal systems where *Patidaars* dominate the farming population, in the 40 villages we visited, *Kshatriyas* dominate the farming, and these are not as well known as *Patidaars* for their agrarian entrepreneurship. While there are stray cases of Saurashtra's Patels having acquired land and settled in the command area, there seems no evidence of large scale 'strategic' land acquisition by enterprising farmers from outside the command yet. In general, we found *Kshatriyas* (*Jadejas, Darbars* etc), *Parmars, Prajapatis*, and a spattering of Harijans and tribals in most of the villages. Some of the villages in Bharuch district have mixed Hindu and Muslim population. Compared to the Mahi command area in Kheda district, for instance, the villages we visited are agriculturally far more backward; and onset of

irrigation will no doubt perk up the rural economy of this region in 3-5 years. Our surmise is that each of the 80,000 ha will produce at least Rs. 8-10,000 in incremental value added thanks to Narmada (direct irrigation plus more productive well irrigation); and the cost of Narmada irrigation will be less than 10 percent of this increased value added.

All the villages visited had taken some action to form WUAs under prompting from SSP field staff. However, almost everywhere, what we found were only management committee's (MCs) with a president-designate. A few of them have already had a general body meeting; but none has actually begun enrolling irrigators as formal members of WUAs. SSP's pricing and other policies too have been evolving only recently; these have yet not been fully communicated to the all the MCs. There is also some confusion amongst the MCs about the bye-laws and specific clauses contained in them. Within SSP too, there is lack of clarity about how the report of the Government of Gujarat Taskforce on PIM will affect SSP WUAs. All in all, there is confusion and ambiguity about the design of WUAs, bye-laws, specific role of WUAs, and the pattern of interaction between irrigators and WUAs, and WUAs and SSP.

Rather than investing money, land, and labour in building field channels and sub-minors, farmers will very likely use lift irrigation and pipe conveyance on a large scale. Farmers are already preparing to invest in diesel pump sets and pipes. Once they see water in the minors, very likely 5-10,000 new diesel pumps and some 4-5 thousand km of flexible pipes will come into the command area.

We had expected to find some work initiated at the village level on creating the water distribution system below the minor by irrigation communities. However, in none of the 40 villages was there any move in this direction. In fact, we found significant resistance to the idea; in many villages, MC members categorically told us that

sub-minors and field channels will not get built unless the government does it. There was some ambiguity about what the government/ SSP will do to help; engineers accompanying us told MCs that the government has recently taken the decision to acquire land for building sub-minors. Some MCs felt that this would be welcome. The general impression field staff gave farmers was that sub-minors to chak level must be lined; and farmers seemed daunted by the cost of lining. There is need to do some rethink on lined sub-minors if WUAs are to be enthused to work on local distribution systems.

In any case, the impression we gathered based on our field visits is that it is very unlikely that irrigation communities will construct sub-minors and field channels in a hurry, if at all. What seems far more likely is that tiny areas adjoining the minors will be flow-irrigated, but a lot more area will be irrigated through diesel pumps and rubber pipes. This mode of irrigation from tanks is already quite popular in many parts. Almost every village we visited had 10-20 diesel pump renters who also provide up to 1000-1500 feet of rubber pipes. Conveying lifted water 1-1.5 km using rubber pipes is quite common in the area. Therefore, rather than investing money, land and labor in building field channels and sub-minors, farmers will very likely use lift irrigation and pipe conveyance on a large scale. In many villages we were told that farmers are already preparing to invest in diesel pump sets and pipes. Once they see water in the minors, very likely 5-

10,000 new diesel pumps and some 4-5000km of flexible pipes will come into the command area. Going rental rate for 5-7.5 hp diesel pumps is Rs 50-60/hour; but with growing density of pumps, these rates may fall. In any case, pump irrigation markets will be a huge presence in the 80,000 ha command. Providing 52 mm of SSP water allocation, that is 5200 m³/ha, will require an average of 150-200 hours of pump irrigation. At 150 hours/ha, the value of water lifted to irrigate 80,000 ha will be around Rs 60 crore. In some villages, farmers did crib that, compared to other government sources, SSP is proposing a higher water fee but levy the same fee for lift irrigation whereas the government policy is to charge half-rate for lift irrigation from canals and tanks. But our overall impression is that farmers will easily accept the proposed higher water fees. Even the higher SSP water fees are just a small fraction of the actual value farmers place on that water, and it should be not difficult to collect at all. This however, does not mean that SSP will be able to collect it easily.

One idea that is deeply ingrained in the minds of farmers is that SSP's need to supply water to them is greater and stronger than farmers' need to use the water.

Some aspects which may have serious implications for the way the situation will evolve have to do with farmers' perceptions about SSP as an organization: [a] While farmers were elated with the real prospects of getting Narmada water, they were also angered by repeated promises from SSP about when water would be available which remained unkept. Everyone understands the constraints the project faced and empathizes with the government as well as SSP; but there is this sense that what SSP and its field staff says cannot be relied upon; [b] this is further complicated by the fact that field staff give different messages to irrigation communities; in one village, for instance, the staff accompanying us explained that WUAs would have to collect water fees from flow irrigators as well as lift irrigators at the same rate. In the same village, another group told farmers the same morning that the government's problem





is of maximizing the use of water; so farmers can pump at will without worrying about water charges. Conflicting messages from SSP staff is a major source of erosion of credibility of the organization amongst farmers; this can be resolved by having a clear and aggressive communication strategy for SSP; [c] We also felt that, in good faith and almost casually, SSP field staff liberally make commitments to irrigation communities to fix their specific local problems; in some villages, farmers came with complaints that some of their lands were water logged; in one village, the community wanted the bed of the minor raised so they could use siphons; in several, they wanted Narmada water to fill their tanks; in some villages, where the paddy crop was burning because of moisture stress, farmers wanted Narmada water released immediately to save the paddy crop. Field staff accompanying us agreed to solve all their problems or at least to look into them. If all their problems are actually solved, SSP will no doubt experience tremendous spurt in its credibility with farmers, its customers. However, everyone present irrigators, SSP staff, and us – were certain that most of these commitments would be difficult to keep, often because it is very difficult, or even impossible, to solve each individual farmer's problem in such a large system. Yet, farmers will not forget these commitments and will use them as a stick to beat the SSP with; [d] One idea that is deeply ingrained in the minds of farmers is that SSP's need to supply water to them is greater and stronger than farmers' need to use the water; allowing this impression to continue is a serious matter and will erode SSP's capability to establish an orderly institutional arrangement for irrigation and must be demolished effectively

and at once, even if it means that a lot of usable water has to be allowed to run off to the sea; [e] Farmers and management committee members we met assigned no seriousness or urgency to SSP's insistence on the operating practices it intends to pursue; for example, we do not think that most farmers seriously believe that water indents will not be honoured unless they are made through WUAs; that WUAs that do not make an indent will not get water; that WUAs which do not pay their dues will be refused water for the next irrigation; and that lift irrigation will actually be charged at the same rate as flow irrigation.

The most difficult challenge in establishing SSP's rules of the game is in ensuring that its writ runs in the command area.

All in all, farmers and local notables take SSP and the government so lightly that they are totally nonchalant about SSP's new water policy, which they expect will not be vigorously implemented. Indeed, the most difficult challenge in establishing SSP's rules of the game is in ensuring that its writ runs in the command area. On October 17, 2002, the president of Vadodara District Sarpanchs' Association led a mob of over 150 youth from 13 villages in Dabhoi taluka, raided the Vaghodia main canal, and forcibly opened its gate to release water into the Kundhela distributary and thence to minors. On the Vanadara minor, for instance, 20 diesel pumps and 40 siphons worked non-stop to irrigate paddy and cotton crops (Gujarat Samachar



2002)². The president was widely hailed as farmers' saviour. Though an isolated event, this marks only the beginning of a trend that might prove ominous, unless nipped in the bud.

CONCLUSION

Based on a brief stint of field work, our assessment is as follows:

1. It is extremely unlikely that the overall vision of the SSP for irrigation management will play out in the 2002 irrigation season. Farmers are certainly not ready; but we think that even SSP is not quite ready to implement its strategy. For example, neither farmers nor field staff knew where to obtain forms for indenting water. Field staff have not thought about what course of action is to be adopted in villages that have minors but not submitted their water indents, or if farmers begin to lift water *en masse* without submitting the indent.
2. It is extremely unlikely, that even in the long run, irrigation communities and WUAs will build below-the-minor distribution systems of the kind SSP expects them to build. Most villages will prefer instead to use lift irrigation and rubber pipes to distribute water. This means that there will be no planned, orderly water distribution by WUAs. Instead, pump irrigation markets will proliferate. From the viewpoint of water use efficiency and economical use of water, this arrangement would in some ways be even superior to the sub-minors and field channels envisaged by the SSP. Pipes will minimize seepage; and farmers paying Rs 50-60/hour of lift irrigation will strive to minimize wasteful use of water. Therefore, in our judgment, a distribution system based on private pump irrigation markets may not be necessarily bad and may even result in better use of the 21" delta SSP plans to provide. Two issues which are bothersome about this are: use of energy and equitable distribution of water. Pump irrigation based distribution will mean avoidable use of 150-200 litres of fuel/ha; and it will be useful to examine if improved water use efficiency justifies this substantial incremental cost. Depending upon the location of their farms in relation to the minor, and the topography of the area, different farmers will have differential access to canal irrigation. Lands adjoining the minor will get plentiful gravity flow; their owners will be the most privileged class. Owners of lands which can get canal water by using siphons too will be privileged because they will not have to spend on lifting. Owners of fields further away and/or higher than the minor will be forced to lift; and those who are too resource poor to own their own pumps and pipes will spend the most for irrigation. Since the lift involved is low, perhaps, it would be useful to promote low lift diesel and even manual and bullock operated pumps for water distribution.
3. What might be the role of WUAs and PIM in the Narmada context, if distribution of water below the minor is done by private lift irrigation suppliers? Considerably more limited, in our view, than would be the case under gravity flow distribution. Indeed, the principal role WUA would now be expected to play is of collecting water fees from irrigators and indenting water on behalf of them from SSP.

RECOMMENDED COURSE OF ACTION

If SSP does open up irrigation in the forthcoming rabi season, it can do little either to strengthen WUAs by capacity building work or to encourage irrigation communities to build distribution infrastructure since there is no time to do either. Over a medium to long run, however, it should keep making efforts to do both. What it can do

² Gujarat Samachar. 2002. "Crop Saved in 13 Villages by Opening the Gates of Narmada Canal", October 18, p 3.

now, however, is important and can profoundly affect the way the project's operation & maintenance will evolve over the coming years. Some of these are listed below:

1. *Indents for irrigation water:* The best and quickest way of forcing irrigation communities into forming functional WUAs is by ensuring that water indents are accepted only through WUAs, and that no farmer who has not submitted an indent through WUA is allowed to use irrigation from the minor, either by gravity or lift. In order that this happens, SSP needs to move fast, make indent forms available to WUA MCs and get them to complete these forms and submit them in a campaign mode.
2. *Advance collection of water fees:* Although the standard practice in Gujarat and elsewhere is to collect irrigation fees after irrigation is over, we believe that is the prime reason behind low collection. SSP's current policy offers WUA's 10 percent discount for advance payment. However, in our view, this gives irrigation communities scope to avoid having to organize now; MCs will take a laid back attitude because they can wait until after the season is over to approach members for dues. This opportunity should not be given. Instead SSP should ask all those WUAs which want irrigation water in rabi 2002 to pay their water fees in advance. That will

mean that MCs will have to call the general body meeting, and will have to ask irrigators to cough up the fees, which is the first step to catalyzing effective WUAs.

3. *Announce an irrigation schedule and adhere to it strictly and at all cost:* At present there is so much uncertainty and fluidity in the thinking of farmers as well as SSP field staff that nobody can say for sure when will the first irrigation be released, and how will water move around the system. Under this situation, WUAs would find it difficult to even complete their indents. SSP should finalize an irrigation schedule as soon as possible and widely disseminate it. It should clearly state which minors will be run at full supply during which week, what is the total number of weeks when water would be provided and so on, so that farmers can plan their cropping patterns and schedules. Once these schedules are announced, they should be adhered to strictly. Doing this will enable MCs to call general body meetings and start collecting advance water fees.
4. *Establish rules of the game:* The key task at this stage is to establish the rules of the game by which SSP will operate. Farmers now look at SSP as *Sarkar mai-baap*. SSP needs to break out of this mould and establish a fair *business* relationship with users. This requires that its organization treats farmers as customers, like all good businesses do; at the same time,



it needs to ensure that basic rules of the game of the business are adhered to by both parties. So SSP should provide specified quantity of water along a specified schedule to irrigation communities which have indented water and paid for it in advance; but those which have not indented or not paid must be prevented from using it. If this rule is not enforced in the first year, chances are that it will never be.

5. *Mechanisms for rule enforcement:* This is easier said than done. If minors in a certain distributary are running at full capacity for seven days, how do WUAs catch defaulting farmers who lift water? How does SSP field staff ensure that WUAs which have not filed their indent or paid their advance do not encourage their farmers to lift water straight from the distributary or breach a nearby minor? Enforcing these rules of the game will be the biggest challenge for SSP. Catching all cases of unauthorized use will be impossible; but a functional level of rule compliance can and must be achieved. If SSP meets this challenge well in the first year by catching a significant proportion of cases of unauthorized irrigation and meting out exemplary penalty, rule violation will decline in future. If numerous cases of unauthorized irrigation remain undetected and unchecked, anarchy will prevail, and it will become progressively more difficult to check it in future.

6. Three alternative mechanisms can be considered for achieving and sustaining functional level of rule compliance: tighter administration, providing incentives to the bureaucracy, or using private franchise.

a. *Tighten administration:* The default option, of course, is to gear up SSP and government machinery to ensure tight rule enforcement. This would imply intensive, round-the-clock campaigns to monitor water use at all levels of the system. We believe that rule enforcement

in this situation requires a level of effort that is unlikely in the governmental mode on a sustainable basis.

b. *The Chinese model of entrepreneurial administration:* To deal with precisely these problems, the Chinese have, during the past 15 years, designed systems to give incentives to bureaucrats to produce better results. In many Chinese irrigation systems, while the state built the main canals and branches, village collectives were required to build the local distribution system.

Like in the SSP command, most village collectives did not build their distribution systems. As a result, many canal systems release water in a medium sized reservoir

from where water is conveyed by canals into ditches from which irrigators lift water. Besides the lifting cost, farmers have to pay for water too, as is envisaged in SSP. But collecting water fee is difficult there as it is here; and so is enforcing the rule that user pays and non-payer does not use. In China's volumetric pricing system, we found constant measurement is not done, yet some of the gains of volumetric charges are reaped. The engineer in charge of a reservoir with, say, 25 million m³ of water capable of serving an irrigation area of, say, 8000 ha is given an incentive on his fee collection. In small systems in Hebei and Hanan provinces in North China, a standard loss allowance at 25 percent was provided to cover seepage and conveyance losses. So the incentive available to the official – over and above his salary--is 10 percent of the excess of total water fee collected less the base value of 75 percent of the dynamic storage in the reservoir costed at government-fixed water rate per m³. Rough calculations show that total incentive earned is no more than 30-35 percent of the regular pay; yet, it creates accountability and efficiency we normally do not find in bureaucratic systems. There

What is critical at this stage of SSP is not the total amount of revenue the project generates or collects, or the total area it covers; what is critical is to firmly establish the following five basic rules of the game:

- **Providing assured irrigation in specified quantity at pre-announced schedule**
- **Accepting indents for irrigation only from WUAs and not from individual members**
- **Supplying water only to WUAs that have deposited water fee in advance**
- **Ensuring that defaulters do not use water once irrigation starts**
- **Making commitments only if they can be honoured**

is growing evidence that this system has been working quite well in China.

- c. *Use business-model:* Another alternative is to institute private franchisees. Dr Y K Alagh has already been talking about a corporation for each of the Narmada

branches. But a simpler idea is to invite private local entrepreneurs as concessionaires or franchise holders to bid for water transmission and fee collection from WUAs. If this is to work well, franchise operators will need to have medium to long term stake; however, contracts can be suitably designed to protect the interests of SSP, franchise holders, and farmers.

In our view, what is critical at this stage of SSP is not the total amount of revenue the project generates or collects or the total area it covers; what is critical is to firmly establish the basic rules of the game which in our opinion should be five: [a] SSP will provide assured irrigation in specified quantity at pre-announced schedules; [b] SSP will receive indents for irrigation only from WUAs and not from individual members; [c] SSP will not supply water to any WUA unless it has deposited the water fee in advance; [d] once irrigation starts, nobody who has not indented or paid for water will be permitted to use water; [e] SSP or its staff will not make commitments to farmers that it cannot keep; and if commitments are made, they will be kept at any cost. If these basic rules of the game are not established now, SSP will most likely go the way other irrigation projects have.



IWMI-Tata Water Policy Program

The IWMI-Tata Water Policy Program was launched in 2000 with the support of Sir Ratan Tata Trust, Mumbai. The program presents new perspectives and practical solutions derived from the wealth of research done in India on water resource management. Its objective is to help policy makers at the central, state and local levels address their water challenges – in areas such as sustainable groundwater management, water scarcity, and rural poverty – by translating research findings into practical policy recommendations.

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IWMI-Tata WATER POLICY PROGRAM

Elecon, Anand-Sojitra Road
Vallabh Vidyanagar, 388120, Gujarat, India
Telephone: 91-2692-229311-12-13
Fax : 91-2692-229310
E-mail: iwmi-tata@cgiar.org
Website: <http://www.iwmi.org/iwmi-tata>



FUTURE
HARVEST
IWMI is a Futures Harvest Center
Supported by the CGIAR

HEADQUARTERS

127 Sunil Mawatha, Pelawatte, Battaramulla, Sri Lanka
Mailing Address : P. O. Box 2075, Colombo, Sri Lanka
Telephone : +94 1 787404, 784080 ; Fax : +94 1 786854
E mail : iwmi@cgiar.org

REGIONAL OFFICE FOR ASIA

(Bangladesh, China, Nepal and Sri Lanka)
127 Sunil Mawatha, Pelawatte, Battaramulla, Sri Lanka
Mailing Address : P. O. Box 2075, Colombo, Sri Lanka
Telephone : +94 1 787404, 784080, 1 ; Fax : +94 1 786854
E mail : iwmi-asia@cgiar.org

CHINA

Center for Chinese Agricultural Policy,
Chinese Academy of Sciences
Building 917, Datun Road, Anwai, Beijing, 100 101, China
Telephone : +86 -10 64889440, 64856535, 64856837
Fax : +86 -10 64856533
E mail : j.wang@cgiar.org

NEPAL

GPO 8975 EPC 416, Kathmandu, Nepal
Telephone : +977-1 535382 (Ext. 486)
Mobile Tel : 9810 - 22573 ; Fax : +977-1 523996
E Mail : d.pant@cgiar.org

REGIONAL OFFICE FOR AFRICA

141, Cresswell Street, 0184 Silverton, Pretoria, South Africa
Mailing Address: Private Bag X813, Silverton 0127, South Africa
Telephone : +27-12 - 845 9100 ; Fax : +27-12 - 845 -9110
E Mail : iwmi-africa@cgiar.org

KENYA

C/o. ICRAF, United Nations Avenue, P. O. Box 30677, Nairobi, Kenya
Telephone : +254 - 2 - 524751, 524000 ; Fax : + 254 -2 - 524001
E Mail : f.gichuki@cgiar.org

GHANA

IWMI Ghana, CSIR campus, Odei Block,
Airport Res. Area, Accra
IWMI Ghana, PMB CT 112, Cantoments, Accra, Ghana
Telephone : +233-(0) 21-784752/53/54 ; Fax : +233-(0) 21-784752
E mail : iwmi-ghana@cgiar.org

REGIONAL OFFICE FOR INDIA

C/o. ICRISAT, Patancheru, AP 502 324, India
Telephone : +91-40 -329-6161 ; Fax : +91-40 - 324-1239
E mail : iwmi-india@cgiar.org

REGIONAL OFFICE FOR PAKISTAN, CENTRAL ASIA AND MIDDLE EAST

12KM Multan Road, Chowk Thokar Niaz Baig,
Lahore 53700, Pakistan
Telephone : +92 - 42 - 5410050-53(4 lines) ; Fax : +92-42-5410054
E mail : iwmi-pak@cgiar.org

UZBEKISTAN

Apartment NO.103, Home No.6, Murtazaeva Street,
Tashkent 700000, Uzbekistan
Telephone : +998 - 71-1370445 ; Fax : +998 -71-1370317
E mail : v.hornikova@cgiar.org

REGIONAL OFFICE FOR SOUTHEAST ASIA

(Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Thailand, Vietnam)
P. O. Box 1025, Kasetsart University Jatujak,
Bangkok 10903, Thailand
Telephone : +66 2 561- 4433 ; Fax : +66 2 561-1230
E mail : iwmi-sea@cgiar.org