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## The Pani Panchayat: Water and equity

### 1. GENERAL INFORMATION

#### *1.1 Title of practice or experience*

The Pani Panchayat (Water Council): Water and equity

#### *1.2 Category of practice/experience and brief description*

In an era of increasing water scarcity, a committed engineer has worked out a radical new set of technological and social innovations that not only helps repair and restore degraded watersheds (thereby increasing water harvests), but, by guaranteeing each family within the community an equal share of the water harvested, meets goals of equity as well. Rarely do technical projects like watershed-management schemes or irrigation projects meet the demands of equity. The Pani Panchayats (Water Councils) set up by Vilasrao Salunkhe do.

#### *1.3 Name of person or institution responsible for the practice or experience*

Gram Gourav Pratisthan

#### *1.4 Name and position of key or relevant persons or officials involved*

Vilasrao Salunkhe

#### *1.5 Details of institution*

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*1.6 Name of person and/or institution conducting the research*

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## **2. THE PROBLEM OR SITUATION BEING ADDRESSED BY THE PRACTICE/INNOVATIVE EXPERIENCE**

In 1972, the state of Maharashtra went through a severe drought crisis. The drought hit several hundred villages with a combined population of more than 400,000 people. During his travels around the drought-affected areas, Vilasrao Salunkhe was struck by the fact that in several areas, there was no water available for agriculture of any kind. Villagers had no means of survival. The government of Maharashtra had determined that the villagers should continue to work **by** preparing road construction materials to enable them to receive a subsistence wage from it under its employment schemes.

Salunkhe found that though farmers owned land, they could do nothing with it without access to a guaranteed source of water for cultivation. This was the principal cause of their poverty. Since there was no water, they could never employ themselves on the land and earn an assured income. In drought-prone areas, this was the fate of both large and small landowners.

No villager wanted to be on the dole as it were: they wanted water **so** they could cultivate. At the moment, they were not asking for water all year round. They wanted water supply guaranteed every year for at least one single crop. Since there was no prospect of this happening, people were leaving the villages and migrating to cities like Mumbai where they could at least eke out a living on the pavements or in the **slums**.

Salunkhe found that the problem could be solved if attempts were made by the farmers themselves to conserve the scanty rainfall that the region receives every year. His primary task was to perfect a watershed-management plan which he first put into effect on land gifted to him by the villages. Through well-established schemes of water conservation and afforestation, Salunkhe

was able to harness enough water to transform the area into a green oasis.

This was his technical success. The more significant aspect of the development work was the social aspect, relating to the problem of equity. Historians have pointed out that not only were the older water-harvesting systems for which India is well known communally owned but the benefits were shared far more equitably than they are nowadays. In certain regions like south India, even lands were rotated among peasants by lots every few years to enable everyone in the community to get access to the most fertile of the village lands. But this principle of just access was not incorporated into policy. Even today, despite the fact that the government agencies have accepted the idea that watersheds must be developed holistically, equity considerations have not been addressed in the implementation of programmes.

In fact, every development project in India today continues to suffer from the problem of equity or rather the lack of it. Invariably, while some people benefit from a project installed, often with public funds, other people pay. Some receive water from a dam, others are displaced in the process. Even in the command areas of irrigation schemes, those with large landholdings get copious quantities of water, whereas those with small holdings and those at the margins of the command get little of it. Salunkhe was determined to end this state of affairs. He resolved that in the schemes he started, the equity problem would be tackled from the inception. This he ensured by insisting that every person in a development area in which a water-harvesting project was coming up would get an equal share of the water. This principle of guaranteed water shares would apply whether the person owned land or not. The innovation had profound implications, for it gave the landless an economic (and, therefore, bargaining) power that had always been denied them because they did not own land. Two other major problems were associated with water. First, available supplies in well-endowed areas were unjustly distributed. Water supplies from large dams and irrigation projects, including lift irrigation schemes, invariably benefited largely the richer farmers. Rich farmers could also command resources with which to undertake lift irrigation projects in which they alone benefited while the rest of the community was left to fend on its own. In addition, most of the good water available even in drought-prone areas was being used for water-intensive cash crops like sugarcane instead of for the growing of food grains. Salunkhe's technological and social innovations provided neat solutions to some of the most serious of these problems and are therefore seen as one of the really useful and significant contributions made to rural development and welfare.

### 3. DESCRIPTION OF THE PRACTICE/INNOVATIVE EXPERIENCE AND ITS MAIN FEATURES

Vilasrao Salunkhe was one of the first people within the country to begin thinking of environmental regeneration in terms of watersheds. And there was no better place to test his ideas than the drought-prone areas of Maharashtra where the rainfall fluctuates between 250 mm and 500 mm per year and where even drinking water is sometimes not available. Salunkhe first tried out his ideas on a 16-hectare plot of hillside in Naigaon village in the Purandhar *taluka* of Pune district. The land belonged to the temple trust of the village and had remained barren and uncultivable for several years. However, since it was offered to him by the villagers, he decided to accept it and got down to work. He signed a lease with the trust for use of the land for 50 years and also paid the trust rent. He also constructed a hut on the plot and began to live there with his family.

He reasoned that if his experiments in water conservation worked here, they would work almost anywhere else. When he commenced work, the plot could not produce more than 2-4 bags of grains a year. Salunkhe began the restoration work by first attempting measures to conserve the **soil** and harvest the scarce rain water. First, a series of contour bunds were raised to trap water runoff and also to protect the soil from erosion. A percolation tank was constructed at the base of the hillslope which he saw was a micro-watershed. He estimated the capacity of the percolation tank at one million cubic feet of water. A well was dug below it and water pumped from here up the hillslope for irrigating the fields.

More than **4,000** trees were planted amid the rocky areas and around **2,000** fruit trees were raised on and around the more fertile bunds. Grass and shrub were allowed to grow on land that was not being cultivated. The area was protected from animal grazing for a while to enable the vegetation to gain strength. Eventually, as the general health of the watershed improved as a result of these measures, production from the land increased to 100 quintals (1 quintal = 100 kg) of foodgrains and the employment generated on the 16-hectare farm enabled five households to survive with 15 head of cattle. The entire exercise of environmental regeneration of the watershed took a whole five years. When it was completed, Salunkhe was able to prove that what could be grown on half an acre of irrigated land was sufficient to support one individual's food requirements for a complete year. Having worked out the technology necessary, Salunkhe now attempted to multiply it and apply it in adjoining areas. But with an important difference. At the Naigaon temple trust farm, the problem of equity had not arisen because this was land held in trust.

But the problem of equity was bound to emerge in a major way in the projects which he was going to help duplicate with the cooperation of farmers who had seen his work at Naigaon in other parts of the region. Therefore, when he commenced the application of these new techniques of micro-watershed management to the first new scheme in Naigaon itself, he proposed a strikingly new idea: that the water resource gained as a result of the project would be allocated to each farmer in proportion to the number of family members (the maximum share per family unit of five members being two and a half acres) rather than in proportion to landholdings. In this way, the benefits of each irrigation scheme would be equitably distributed. Overall agricultural production would also increase because water would be allocated to a large number of small farmers and it is well recognised that small farms are able to work at higher levels of productivity than large farms.

The idea Salunkhe proposed was that as water is a common property resource, all the villagers should have equal rights and access to the utilisation of the water harvested in the area. This was translated into practice by offering membership of the lift irrigation schemes to landless villagers. By doing this, the landless could become sharecroppers in the lands of the larger landholders who had excess land but could do nothing with it. This also solved the problem of employment within the village itself. But for all this to happen, the lift irrigation schemes must be collectively undertaken by farmers as a group rather than on an individual basis. Collective control over a lift irrigation scheme can also enable the group to ensure that scarce water is judiciously used and allocated not for water-guzzling crops like sugarcane but for seasonal crops, including foodgrains, since these do not require large quantities of water. The water rights of a family were also detached from land ownership, which meant that if a piece of land were sold to a new owner, then the water rights reverted to the group and the new owner would not automatically get rights to water. Salunkhe also worked into his schemes scope for farmer participation in the design and investment proposals related to lift irrigation schemes they wished to install in their area and insisted that the water management committees take full charge of the lift irrigation schemes. He insisted that at least **20%** of the investment in lift irrigation schemes must be put in by the members of the scheme. But his principal insight was to insist on equity and to be able to prove that once the equity problem was taken care of, society as a whole improved its prospects, whereas in the conventional system supported by the government, only those with vast resources benefited in proportion to their assets and landholdings while the rest of the community was left to fend for itself, a permanent guarantee for increasing disparities among different sectors of the population.

#### **4. DESCRIPTION OF THE INSTITUTION RESPONSIBLE AND ITS ORGANISATIONAL ASPECTS**

For the purpose of applying his social innovations, Salunkhe initiated the Gram Gourav Pratisthan Trust in 1974. All the experiments in watershed management and the later multiplication of more than 50 lift irrigation schemes in the area were carried out with the support of the GGP. The GGP itself was supported financially by donations received from industrialists, Salunkhe's own industry, and from several international aid agencies. The GGP played a catalytic role in supporting groups of farmers from different areas who wished to carry out programmes for water harvesting and lift irrigation schemes. It provided money in the form of interest-free loans to enable farmers to meet the costs of such schemes. It also trained young boys from the state at its campus at Khalad, employing a syllabus which consisted of 20% theory and 80% practice. These young men were soon equipped to handle the technical problems connected with the lift irrigation schemes. At present, the GGP continues to train such "barefoot" managers, civil engineers and personnel from non-governmental organisations (NGOs).

The GGP also made a policy decision that no scheme would be implemented unless it had two components:

- (a) it came from a group of farmers and not from individuals; and
- (b) they were ready to put up 20% of the cost of the scheme. This invariably brought about greater cohesion in the village set-up, since it forced villagers to work together and maintain their schemes in their own interests.

#### **5. PROBLEMS OR OBSTACLES ENCOUNTERED AND HOW THEY WERE OVERCOME**

The principal problem encountered by the organisation was the lack of concern sometimes shown by government bureaucrats in the different departments dealing with agriculture, electricity and irrigation. When Salunkhe, for example, first approached the agriculture department for carrying out water conservation plans in the villages of the *taluka*, he was told that technicians were not available to either prepare the plans or carry out any surveys. Eventually, Salunkhe had to draft students from an Engineering College to carry out the work.

After several lift irrigation schemes were approved by the government and even the subsidies had reached the farmers, the electricity department did not want to consider the demand for power to energise the sets. Electricity proved to be a more difficult proposition than finances. The farmers threat-

ened a boycott of the elections and during a protest agitation, 200 of them were put in jail for eight days. Finally, their demands were met.

Other problems were caused by the political instability of the period which often delayed arrival of subsidies, created such hurdles that farmers could not procure subsidies, or delayed electrical connections for lift irrigation schemes until years after such schemes had been paid for and ready for use. In most cases, the gap between the time the villagers approached the authorities and the time they got the support that was legally due to them was approximately five years!

The second major problem was the non-availability of civil engineers, who refused to work in the villages, preferring the cities instead. This problem was eventually solved by creating a cadre of young men who were trained as “barefoot engineers”, equipped with basic civil engineering skills so that they could assist farmers with technical aspects of lift irrigation schemes and other water-harvesting projects.

## **6. EFFECTS OF THE PRACTICE/INNOVATIVE EXPERIENCE**

The impact of the successful innovations introduced by Salunkhe and the GGP is truly astonishing. Barren lands that had produced little or no food were gradually producing one good seasonal crop, which helped farmers survive the year with dignity. In some areas, as water availability increased, farmers could go on for two crops. The 50-odd schemes co-sponsored by the GGP eventually enabled 3,000 acres to be brought under protective irrigation, benefitting a population of some 10,000 people from 1,500 families.

The availability of water made possible through conservation schemes and percolation tanks meant that drinking water for the village population was accessible and close at hand and villagers, women especially, did not have to trudge across long distances for water in the hot sun any longer.

## **7. SUITABILITY AND POSSIBILITY FOR UPSCALING**

The innovations described above are of two kinds:

- (a) The techniques of micro-watershed management can be upscaled, though with variations for different eco-regions. Basic techniques of contour bunding, digging of percolation tanks in the lowest point of watersheds, etc. are well known and can be found in any textbook on irrigation though they are rarely applied. No technique available will be of any assistance, however, unless the engineer is able to grasp the unique feature of the

watershed and of the ecosystem in which it is supposed to function. This can only come about from acute study and observation, including consultation with people in the immediate environment.

- (b) The social principles involving the guarantee of equal water shares to villagers on a per family basis, and the setting up of the structure of the five-member Pani Panchayat or Water Council (*Pani* = water; *Panchayat* = five-member council) which takes charge and leadership of the schemes, can be and are now being applied in other areas of the country as well.

## 8. SIGNIFICANCE FOR (AND IMPACT ON) POLICY-MAKING

Several of the principles behind the organisation of the Pani Panchayat ought to be made part of public policy. First, the principle that people should have equal shares in common resources, if adopted, would revolutionise society in far-reaching ways. Today, a landless person in the village is seen as a person who has no right to resources just because he has no land. Because of this, he often also does not have political power since it is assumed he is poor and therefore his views need not be taken into account when decisions concerning his survival or that of the community are being made.

The Pani Panchayat guarantees him the right to a share of water even if he has no land. He can then dispense with this right as he wishes, particularly if he has no land on which to use the water. He can use it as an input on the lands of large landowners: both together can thus produce output where none could before individually. Present policies dictate that those who have large landholdings get larger quantities of water and those nearest the water source get more water than those who are far away. Such policies should not form the basis of democracies based on the idea of equality and equity. The technical aspects of watershed management and the lessons of Naigaon have been incorporated by the government in the conception and planning of its comprehensive watershed-development programmes.

## 9. POSSIBILITY AND SCOPE OF TRANSFERRING TO OTHER COMMUNITIES OR COUNTRIES

There is every scope for transferring Vilasrao Salunkhe's ideas to other communities and countries, as both the technical and social innovations are such that they can be readily understood and implemented with appropriate adaptations to suit local circumstances. The idea of planning development on the basis of watersheds in place of piecemeal development projects which are

conceived in isolation is now well-established and has become a routine plank of public policy, at least in a country like India. The government now routinely issues development grants for the purpose of watershed development. The second attractive aspect of Salunkhe's work, the principle of equal shares in water sources, can also be adopted with minor variations in different situations with significant impacts on human welfare.