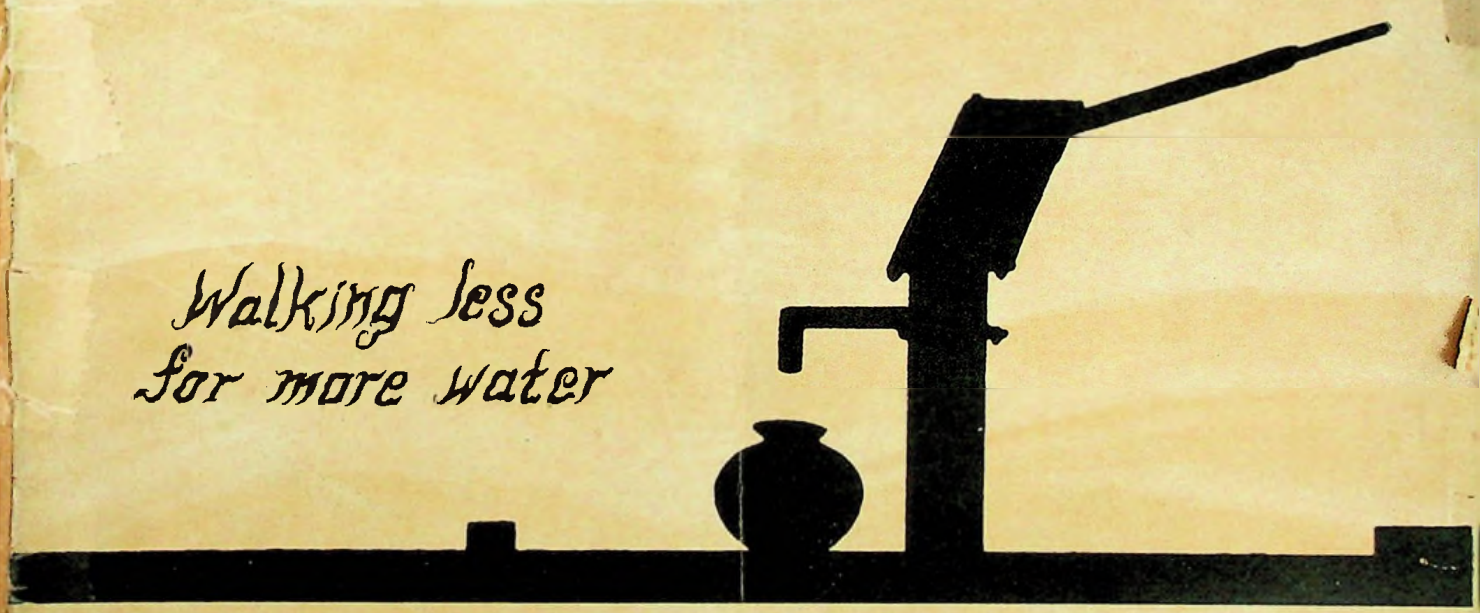
HEALTH FOR THE MILLIONS

Vol. VII No. 4 A Bimonthly of the Voluntary Health Association of India AUGUST 1981



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Editorial

Our previous issue was focussed on drugs. This issue has the theme water and sanitation. We aim to highlight some issues on water and sanitation as relevant to India.

The problem of water and sanitation is complex in a country as diverse as ours. Many of you would have your own experiences to narrate. You would have attempted to introduce better water supply and sanitation facilities in your community. Or you may know somebody who has tried. The result may have been a success or a failure or in between. Write to us and share with us and all our fellow readers. Write to us also on any experiences related to health which you feel should be more well-known.

Incidentally, we are in the so-called International Drinking Water Supply and Sanitation Decade (1981-90). Please see the back cover.

* * *

We owe much editorial help and guidance for this issue to Shri T. Vijayendra – who was also the Executive Editor of this magazine for some time in 1979.

In the last issue on drugs we were similarly helped in the design by many, and chiefly by Mira Shiva, our colleague. Mira is an M. D. and an unusual person. She is always bubbling with ideas and facts. Like her historical namesake she has a tremendous commitment and a passion for VHAI philosophy and goals. We failed to mention this in the last issue, an editorial oversight deeply regretted. Her contribution in this issue includes the piece on Safai Vidyalaya and the column on drugs.

* * *

We have been receiving many enquiries about the delay in publication. This is chiefly due to a series of unanticipated delays. We will be back on schedule by the end of the year.

Water, Sanitation and Health

Water affects the health of a poor people in a cruel way. Water is essential for health. It makes up nine-tenths of the human body's volume and two-thirds of its weight. No one can survive without water for more than a few days. The amount and quality of water available to people is directly related to their economic wellbeing.

Most diseases can be prevented by the correct use of water. In India, 60 per cent of the diseases can be eliminated with clean drinking water to the people. And 80 percent of the diseases can be cut down by good clean drinking water and sanitation facilities. Would it make more sense to teach more of water management and sanitation in our medical colleges, nursing schools and many other health related courses, than the many not so relevant items in the curriculum? Water-caused diseases related to lack of proper water and sanitation could be divided into five types :

Water-borne—spread by drinking or washing hands, food or utensils in contaminated water,

Water-caused Morbidity and Mortality for Asia, Africa and Latin America

	Infection	*Infections thousands /year*	*Deaths thousands /year*	*Average no. of days lost per case*	*Relative disability**
WATER-BORNE DISEASES	Amebiasis	400,000	30	7-10	3
	Diarrhoeas	3-5,000,000	5-10,000	3-5	2
	Polio	80,000	10-20	3,000+	2
	Typhoid	1,000	25	14-28	2
WATER-WASHED DISEASES	Ascariasis (roundworm)	800,000 1,000,000	20	7-10	3
	Leprosy	12,000	Very low	500-3,000	2-3
	Trichuriasis (whipworm)	500,000	Low	7-18	3
WATER-BASED DISEASES	Schistosomiasis (bilharzia)	200,000	500-1000	600-1000	3-4
DISEASES WITH WATER-RELATED VECTORS	African trypanosomiasis (sleeping sickness)	1,000	5	150	1
	Malaria	800,000	1,200	3-5	2
	Onchocerciasis (river blindness)	30,000	20-50	3,000	1-2
FAECAL DISPOSAL DISEASES	Hookworm	7-9,000,000	50-60	100	4

Source : after Julia A. Walsh and Kenneth S. Warren, Selective Primary Health Care : An Interim Strategy for Disease Control in Developing Countries, The New England Journal of Medicine, vol 301, no 18, November 1, 1979, p 967.

* 1 means the sufferer is bedridden; 2 able to function to some extent; 3 able to work; 4 experiences minor effects.

which acts as a passive vehicle for the infecting agent. **Water-washed**—spread by poor personal hygiene and insufficient water for washing. Lack of proper facilities for human waste disposal is another contributing factor. **Water-based**—transmitted by a vector which spends a part of its life cycle in water. Contact with water thus infected conveys the disease-causing parasite through the skin or mouth. **Water-related vectors**—contracted through infection-carrying insects which breed in water and live near it, especially when it is stagnant. **Faecal disposal diseases**—caused by organisms that breed in excreta when sanitation is defective.

The table on the previous page shows figures for Africa, Asia and Latin America (1977-78).

Social and Economic Costs

The social and economic costs to a poor society because of water-related sicknesses can be quite disastrous. Typical consequences are : loss of income and human productivity, resulting in more poverty for the family; and loss to gross national product. In India, water-borne diseases alone claim 73 million work days every year. The cost, in terms of medical treatment, has been estimated to be around 500 crores of rupees every year.

In almost all villages in India, it is still the burden of women to procure water from wells, ponds, rivers and other sources far and near. This itself results in spending enormous amount of time for a few litres of water. Could this time be used better with a better water supply system ?

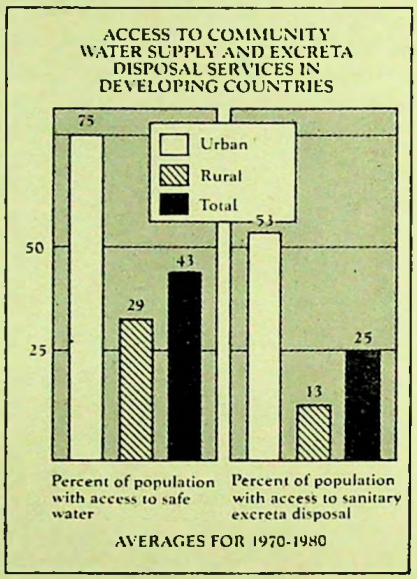
In India, the problem of water supply in both rural and urban areas is further complicated by class and caste factors. The upper classes and the "higher" castes manage to control the better sources of water, leaving the less hygienic of the not-so-hygienic water to the less privileged. Or in many cases none at all.

Water and Sanitation

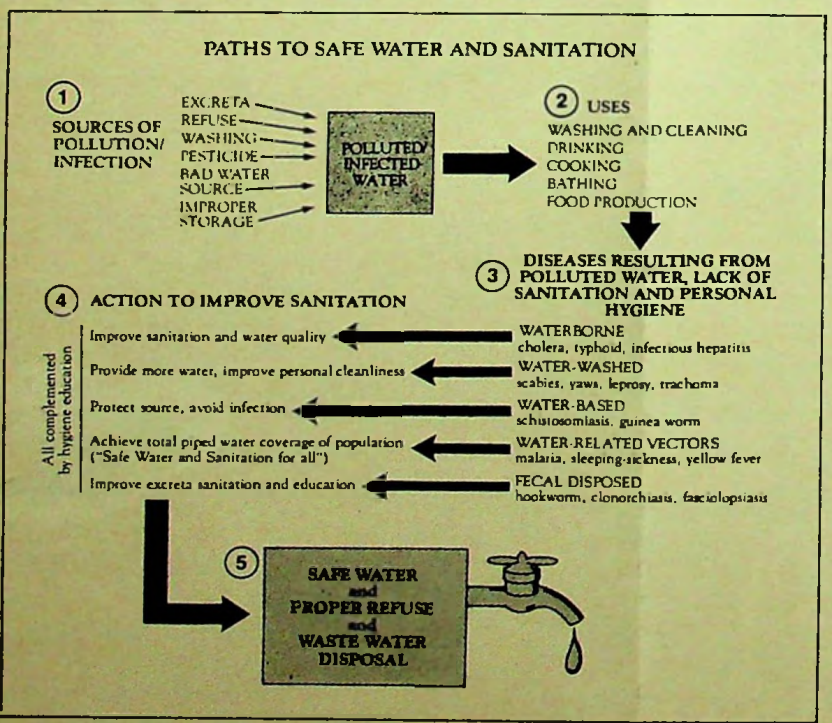
Clean or safe drinking water by itself may not prevent water-related diseases in the community. Water **with** improved sanitation **and** excreta disposal **and** health education can result in significant health improvement. Clean water can easily get polluted—at source, during transport or storage, or during and after usage. All these many ways of contamination of water can result in a number of debilitating diseases.

More than 5,65,000 villages in India and almost all major towns and cities suffer from a lack of safe water supply and proper sanitation. The problem is immense and complex but surmountable to a large extent. The tremendous need for action at all levels is obvious.

* * *



(Courtesy UNICEF)



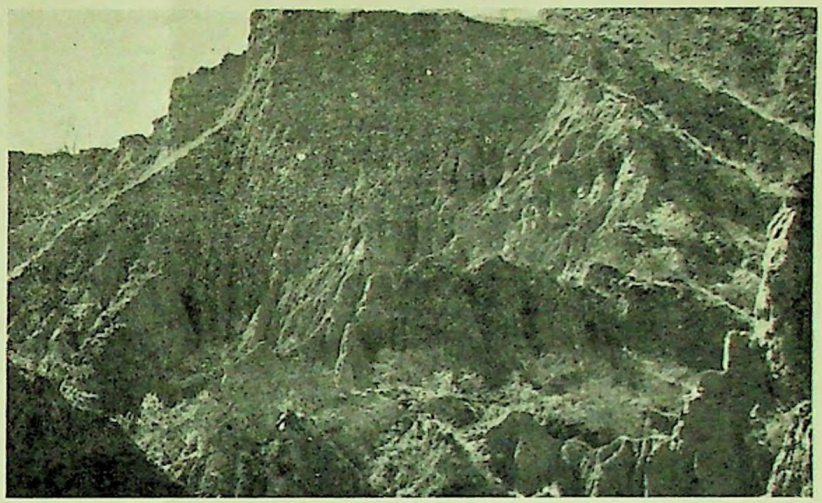
(Courtesy UNICEF)

WATER IN DRY HILLS

The Story of Sukhomajri

(How does one bring back water to a water-scarce area—where trees have been felled madly, and where there are no nearby streams nor easy access to ground water? The Sukhomajri story describes an on-going experiment of people's participation in environmental conservation).

Sukhomajri is a village in the Shivalik hills some twenty-five kilometers from Chandigarh. Until three years ago Sukhomajri was a drought prone village—if the monsoon failed, as it often does, the *kharif* crop of maize would wither away in August. The *rabi* crops of gram and *desi* wheat would not bear a grain. Sukhomajri ran chronic deficits of food and fodder. Conventional irrigation was not possible as canals could not be brought into the hills. There were no perennial streams nearby, and ground water, if at all, was far too deep. Where could one possibly get water in these dry hills?



The dry hills of Sukhomajri before the experiment...

Uncontrolled Grazing

Villages in the Shivaliks typically are settlements in the flood plains of the hillocks. The hill spurs begin where the agricultural fields end. These hill sides, though mostly government reserve forests, are and have always been the grazing ground for village cattle. Uncontrolled grazing and indiscriminate cutting of trees for fuel and commercial purposes has caused widespread denudation in these hills, leading to severe erosion in the monsoon rains.

Until three years ago the hill sides that form the backdrop of Sukhomajri were among the worst of the denuded Shivaliks. There were virtually no trees and grasses in these hills because of uncontrolled cattle grazing. Due to the lack of trees and grasscover, the hills would virtually melt under the monsoon rains.

Transformation

That was some three years ago.

Today the villagers in Sukhomajri can produce at least two assured crops even in an year of drought. They have begun using better seeds and fertilizers with higher yields. They have stopped grazing their cattle in the surrounding hills. Trees and grasses have started growing in the hills. Sukhomajri is more prosperous today than three years ago. There is more food and fodder produced in the village now. The physical environment—the natural resource base around Sukhomajri, is more stable and productive today than it was three years ago.

This transformation is the result of an experiment that the Central Soil and Water Conservation Research and Training Institute at Chandigarh took up in 1978. Scientists from this Institute began an operational research project in Sukhomajri. The idea was to demonstrate under real life conditions the viability of scientific techniques of soil and water conservation. The scientists learned soon that their techniques of soil and water conservation would not go very far unless grazing was stopped in the hills. They asked the villagers to stop grazing of cattle. A few agreed but most did not. Some even showed the scientists the way out of Sukhomajri! Environmental conservation might be crucial in the long run but the villagers were more concerned about their

short term grazing needs. They feared loss of access to the hills for ever, and even appropriation by government of village common lands at the foot of the hills. What is more, there was nothing tangible and significant in the short run for the villagers to rally round.

Problems of.....

Happily, the scientists were willing to learn. Their innovation paid off when they built a small earthen dam by plugging one of the ravines. The dam would control erosion and flooding downstream by holding back monsoon flood waters from the hills. It would irrigate village agricultural lands and above all it would induce villagers to stop grazing in the hills to protect their own valuable asset—the dam, from getting silted up. Irrigation would increase consumption right away and would lead to environmental conservation in the long run.

So far so good.

Water Management

Irrigation brought in more problems. Firstly, how do you distribute the water so that everyone, landed and landless, feels involved? Traditionally irrigation benefits are tied to land ownership : If you own land you benefit from irrigation in proportion to your land holding. If you are landless, hard luck ! However, if the landless had water rights they could trade these in cash or in kind, particularly where there is a net water deficit as at Sukhomajri in spite of the dam. This was resolved when the villagers among themselves agreed that every family would get an equal share of water, irrespective of land holding. This system has worked for over a year now and there have been instances of trading surplus water for share cropping rights and other favours in kind.

The second problem was how to manage and maintain the project. Someone would have to respond to water demand, regulate distribution, collect water charges and arrange repairs. Also, though the villagers had now agreed to abstain from grazing the hills in their own interest, there would be deviants and someone would have to monitor them and bring social pressure to bear on them. Two options were considered : One was for the Institute to post an employee in the village and run the project and the other was to help the villagers set up an organization of their own to run the project while the Institute gradually withdrew from the day-to-day responsibility. The first alternative was clearly full of pitfalls—the Institute would have to divert attention from research to perpetually run a village development project. Given the life saving quality of water, the Institute employee in the village could become a centre of power and power does corrupt. The cost of running the project would be high, making irrigation costly to the villagers and, most importantly, this way the project would never be owned by the villagers, i.e., the onus of sustaining the enthusiasm of the villagers would always remain on the Institute.

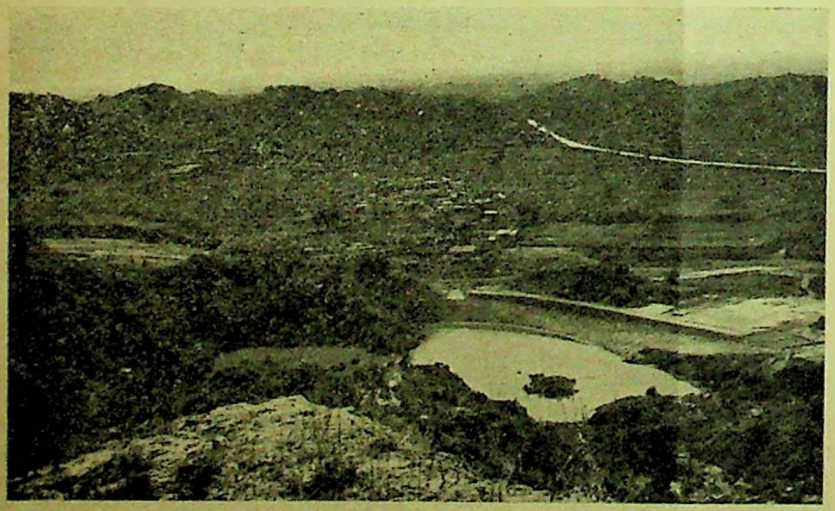
Therefore the second alternative was chosen.

Project personnel helped the villagers set up an Association as a duly registered society. This Association has taken over the operations and maintenance responsibility. The Association has employed a young, literate villager on a part-time basis to distribute water and collect water fees. Printed copies of equal (hourly) denomination are used for water distribution and exchange. Institute staff continue to oversee the project and will withdraw gradually.

As of now the experiment seems to be working. There has been no grazing in the hills. The village Association is performing well.

The experiment has been replicated at another village nearby and can be replicated in hilly terrains all over the country.

...and after the experiment.



T. VIJAYENDRA

Sanitation with Participation

—is it possible?

Sanitation and excreta disposal in urban and rural areas are complex problems. There are no ready-made solutions.. Solutions for particular communities have to be worked out in consultation with the people who are likely to use them, the implementing agency and competent technicians. In this article, we discuss primarily the experiences of an urban agency and the related issues of participation in sanitation.

The unsafe disposal of faecal matter and the lack of potable drinking water are major causes of morbidity in India. They are typified by the large number of deaths in our country. In the case of human excreta disposal systems, the situation is particularly bad because few people take interest in it, and discussion is considered impolite to the extent of being even vulgar ! The attitude among even educated Indians seems to be : Please keep it out of sight and do not mention it while we are eating, There are also wrong beliefs that flush latrines and underground sewerage are the proper things, and it is because of our poverty, our cities and villages are dirty. Some people are also aware of the plight of the Harijans who have to carry it on their heads in many parts of the country.

Explosive Situation

In reality, the situation is quite explosive. The growing urban problem is making the problem frighteningly serious. More and more people are using railway tracks and bylanes making the city and towns literally hell holes. Less and less Harijans are prepared to do the job. The cost of the sewer system and treatment plants is prohibitively large and we just cannot meet the situation. The existing sewer systems are facing serious problems and even if we had the money, critics say that it is probably worse than the present situation.

Meanwhile, surveys continue to show that the vast majority of the Indian population suffers from parasitic infections and soil-transmitted helminths. Research conducted among slum dwellers and rural populations near Delhi, Calcutta, Bombay, Aurangabad and Lucknow, are reported to indicate that the lowest percentage suffering such infections is as high as 36.2% which is one-third of the population. The level of infections is generally quoted to be around 66% and often as high as 80%.

In nine of the major states and union territories, 40% of the households are without latrines while in the eastern states and union territories, 40% of the households are without latrines. In Manipur, Tripura and Meghalaya this figure is less than 10%. In general, only 20% of the rural population has some sort of access to toilets. And the figures for urban populations (see box) are quite shocking and can now be expected to be worse, because of increasing populations, than at the time of the National Sample Survey,

The plans of the Government of India include provision of safe drinking water for its entire urban

Urban Sanitation—Haves & Have nots

No. of urban households in the country using toilets connected to the sewerage systems.	20%
No. with exclusive use of toilets in the urban areas (the remainder share with other households or use public toilets).	7%
No. of urban households with water-borne latrines connected to septic tanks.	14%
Percentage of urban population serve with bucket latrines.	33.3%
Percentage of urban population with no toilets.	33.3%

—National Sample Survey, 1978

and rural population by 1990. There are also plans to provide facilities like toilets; adequate drainage and garbage disposal services. However, in the rural areas, only 25% of the population is to be brought under the sanitation programme during the period of the water supply and sanitation decade, 1981-1990. The problem is medical, social and managerial.

Methods Adopted

There have been broadly four strategies in dealing with the disposal of human excreta (see the box below). This is of course apart from the traditionally predominant way of open air defecation in the fields, open grounds, railway lines, dirty nallas and river banks. In the latter cases, it is particularly humiliating for women to go necessarily either early in the morning or after dark. In Bombay, cases have come to light where they were raped on such occasions. (It is this section of the population also that is the victim of the most important and the biggest group of diseases known as enteric diseases).

One-third of the urban population in our country is served by the bucket privy. Apart from being unhealthy and a strong source of disease, they are extremely unpleasant. People prefer to do it in the open than use them. Its most damaging weakness lies in the employment of human beings in such dehumanising work. Mahatma Gandhi was very moved by their plight and did much to remove the social stigma. He initiated several programmes for Bhangi Mukti and founded the Harijan Sevak Sangh. These programmes have contributed significantly to the development of an alternative, cheap and safe latrine.

Appropriate Economics

The underground sewer system is an alternative to the bucket latrines. But the costs are prohibitive for this system and therefore is to be ruled out in the consideration of any lowcost options for the entire country. To get an estimate of the all-India picture : At the present rate of taxation if the entire revenue of the central and state governments was to be exclusively used for 60 years for provision of underground sewerage, only half the population of the country at that time would be covered. Also, there are tremendous possibilities of drinking water and river water pollution because of the sewage system. The sewage system takes up as much as 40% of the pumped water supply in the town. The large amounts of sewage sludge has to be disposed of in rural areas (in cases of urban drainage). This is only shifting the problem to the rural areas. The sewage system and flush toilets are typical products of Western industrial revolution. The Western approach typically comes from ecology considerations and not from cost considerations or the impossibility of providing latrines for everyone, because they have flush toilets in most houses.

Different countries are experimenting with different methods : incinerating toilets, composting toilets, biological toilets, oil flushed toilets, vaccum systems, aerobic tanks, etc. Evidently there are many technologically possible solutions and which one will be appropriate depends on all the social factors of a situation—economic, social and cultural. Solutions in India have to be low-cost, technologically simple, so that people with little training can use it and of course it has to be ecologically sound. The last means the possibility of using the waste as manures. Gandhian and other agencies have worked towards precisely such a solution.

Work in India

The oldest method—squatting in the field—is still used in majority of rural areas. This method is still an excellent method and can be slightly improved by covering the excreta with mud. The saprophytic bacteria in the upper layers of the soil destroy the pathogens in the excreta. The result is a stable humus-like product and if the

Four Ways of Excreta Disposal

	METHOD 1	2	3	4
With water	Yes	Yes	No	No
With transport	Yes	No	Yes	No
	—Flush toilet connected to sewer —Aqua privy connected to sewer	—Flush toilet joined to septic tank —Cesspool, aqua privy biogas plant	Buckets & bore hole latrines	Compost pit latrines

materials spread out, it dries rapidly. This can also serve as an excellent manure for fields. However, this method is not fit for urban areas because of aesthetic considerations and for want of space. Even in rural areas with extensive cultivation particularly in rice fields and in the rainy season, it becomes difficult. Lack of sun keeps the stench longer and pathogens do not die out easily. People working in the fields get and spread enteric diseases rapidly. Also, the exploding numbers of people force us to search for other viable alternatives. These present designs have taken a long time to evolve through the unsuccessful, foul-smelling and dangerous latrines—which is one of the reasons people are very reluctant to construct latrines or use them.

At present in India, there are two methods in situations where sewerage is not available. One is the septic latrine and the other is the modified pit latrine. The cost of housing is common to both. The latrine itself costs around Rs.2000/- for the septic tank and around Rs. 500/- for the modified pit latrine known as Sulabh Shouchalaya.

Sulabh Shouchalaya Sansthan

The history and work of this Gandhian organisation in Patna has already been discussed in this magazine. *(Public Latrines for Urban Poor,* December1979. Contact address : Shri Bindeshwar Pathak, Sulabh International, Near Reserve Bank, Patna-800001.) The Sansthan propagates essentially a pit privy with a water seal. The credit of the Sansthan is that it has help build and propagate it in mass scale and has made necessary modifications. The users of the Sansthan not only use it for the latrine facilities, but also to bathe and wash clothes.

Users and non-users

Initially the greatest users were the mobile population. Among the regular users were the rickshaw pullers of Patna town. Over the years other people have joined. The first category is the shopkeepers and their assistants, hotel boys, etc. Secondly, people who come for shopping also use them. So market facility too has become important and pays well. Today people from middle class come in cars. Muslim women in Burkha too come and use it with confidence. The Sansthan also has rules for free facilities to those who cannot afford it.

Participation and...

The most noteworthy feature of the Sansthan is the participation of the people. The income in Patna, for instance, rose from Rs. 500/- per day to 600, 1100, 1500, 2000 and now it is Rs. 2200/-. It is important to note that their income is from the beneficiaries and in the form of 10 paise and 5 paise per use of the latrine and *not* from the donations from rich people. That the Sansthan is self-sufficient in this public facility, is an unique thing in the world. How has this come about ? The Sulabh Shouchalaya facilities are neat and clean. It is so clean that my friend who did not hesitate throwing in matchsticks and ashes, felt very embarrassed and could not find a place to throw them ! People initially hesitated and asked questions. But now it is a seven to eight year old institution. People know about it, use it and pay for it without hesitation. A culture and a tradition has been created which can be called a civic sense and public utility in the best meaning of the term. Today people from all classes come and use it.

By and large, as a policy for a new town (like Hyderabad, Howrah), the Sansthan asks for a two-year 50% subsidy for maintenance and feels confident that

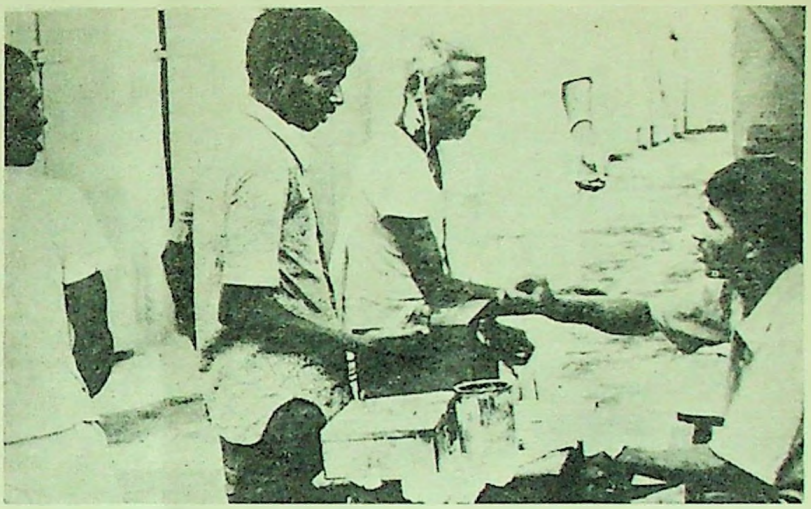


Photo : Madhu Sarin

Taking washing powder for cleaning hands

after two years it will work out to be self-sufficient.

But one cannot be lulled by the success. There are still the poorest of the poor, who cannot afford to pay or do not live near the facility. The location of the facility is so chosen that 75% of the users can pay for it. Poor people who live in slums cannot afford a latrine of their own and a public facility.

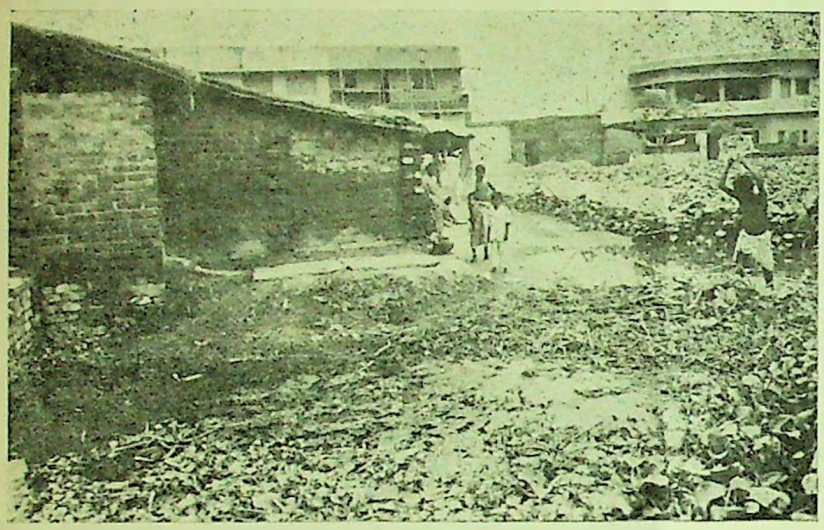


Photo: Madhu Sarin

Sulabh Shouchalaya in a water logged area.

The location of the facility will not function in a self-sufficient manner. Creating a free facility on the other hand, will increase demands from places that can pay and will kill the basic spirit of self-reliance.

The problem is tough and the Sansthan has no ready-made solutions. In one place, a local group of people have taken the responsibility and they get Rs. 2/- per month from local users. Today three to four units are being tried.

Participation

Some form of participation or the other has now been recognised to be a key to successful systems of water supply and sanitation in the community. The Sulabh Shouchalaya Sansthan experience and that of Safai Vidyalaya (Ahmedabad) has indicated to us that participation by the community is not impossible.

An excellent review of conclusions from a wide literature on the participation of communities in water supply and sanitation programmes is : *Participation and Education in Community Water Supply and Sanitation Programme : A Literature Review* by Christine Van Wijk-Sijbesma (204 pages, 1979, Technical paper No. 12 from International Reference Centre for Community Water Supply). Some authors of this book have observed that handpumps are broken down 20 to 70% of the time. In some countries village water systems are breaking down faster than they are being built. "A community is more likely to cooperate in the implementation, operation and maintenance of new systems if it has had a say in the preparation of plans".

Many authors have stressed "the importance of presenting the community with the various technological solutions which are feasible, ranging from simple source protection and pit latrines to multiple house connections. Community choice should include the possibility of rejection of any immediate source improvement. Although this may seem a negative outcome, each community has its own criteria for calculating sets of trade-ofs, so that their perceptions of the usefulness and effects of improvements may differ considerably from those af the agency. Besides, self-made choices will ensure a greater commitment than solutions presented from outside."

Recommended Study

Concludingly, it may be helpful if we mention books and sources for those readers intending to do something in their communities. The bibliography *Low Cost Technology Options for Sanitation : A State of the Art Review* (184 pages by Witold Rybczynski, Chongrak Polprasert, and Michael McGarry, 1978) offers an excellent summary of the technologies relevant to urban and rural settings in developing countries, and is a guide to hard-to-get technical litereture.

The book *Sanitation Without Water* by Uno Winblad and Wen Kilama is an excellent book that discusses technologies that could be appropriate to Indian conditions, with modifications. Similarly, the booklet *Small Excreta Disposal Systems* (published by the Ross Institute) is an useful small reference manual on the range of options available for small communities. "Design formulas are included when appropriate and (for experienced people) it is possible, using this booklet, to design the main elements of the system". The WHO publication of the same name

(*Continued on page 16*)

CHINU

Walking Less For More Water

The Evolution of India Mark II Pumps

Water. Where I get it ? Oh, I walk two hours every time, and two hours back. I do this twice a day. Are we sick ? Oh ! Often we have running stomachs, especially small brothers and sisters. If only we could get a well in the village.....''

—Nkobo girl,
Southern Sudan

The two basic problems of drinking water are : It is not available easily and it is unhygienic. And in those villages it is available, it does not easily percolate to the poor and the less privileged.

Some 1.53 lakh villages, out of a total of 5.76 lakh villages in India, are classified as "problem" villages, that is, they are located in remote, hilly or desert areas where the water source is below a depth of 50 feet or 1.6 km away; or where the water contains elements dangerous to health, endemic to cholera and worm infestations ; or where sources contain excessive fluorides, chlorides, iron, etc. These villages without an adequate water supply are not evenly distributed in the country. Some areas like West Bengal, Karnataka and Tamil Nadu are better off whereas Assam, AP, Rajasthan, Himachal Pradesh and Jammu and Kashmir suffer severely. The table below indicates the extent of the problem.

The government has attempted to give priority to the problem under such schemes as Accelerated Rural Water Supply Programme (1972-74 and 1977-78) and the Minimum Needs Programme (1977-78). By 1978, some 58,000 villages are reported to have been covered. The expenditure during the First Five Year Plan was only Rs 3 crores, whereas the Draft Sixth Plan (1978-83) makes a provision of Rs 1458 crores. However, to meet the goal of the Water Decade to provide potable water to all by 1990, the resource requirements are estimated to be Rs. 7000 crores !

Water Below

The exploitation of ground water has invariably emerged as

Percentage of villages without adequate water supply (1977-78)

Name of the State	*Percent*
1. Andhra Pradesh	58
2. Assam	69
3. Bihar	24
4. Gujarat	18
5. Haryana	50
6. Karnataka	3
7. Kerala	36
8. Madhya Pradesh	10
9. Maharashtra	11
10. Orissa	23
11. Punjab	11
12. Rajasthan	52
13. Tamil Nadu	7
14. Uttar Pradesh	27
15. West Bengal	2
16. Himachal Pradesh	61
17. Jammu & Kashmir	80
18. Nagaland	38
19. Tripura	41
20. Manipur	33
21. Meghalaya	33
Sikkim	N.A.
Total average	26

Source : GOI Report

(Continued on page 12)

Voluntary Agencies and Sanitation

A study of the work of some voluntary agencies in the matter of sanitation is helpful in planning for communities elsewhere in the country. D.K. Mishra in the Oxfam Report, *A Survey of Selected Sanitation Projects in India* (March 1981) has this to conclude : "Sanitation is yet to become a priority for the 'last-man', whether residing in a rural or an urban area, as his needs are different...The living conditions of the urban poor are more unhygienic than their counterparts in villages. When a sanitation programme is designed, the priority areas should be urban slums, and not rural areas". **The S.S.S.** of Patna (see the article *Sanitation with Participation* in this issue), for instance, believe that in rural areas, housing is a priority and not sanitation. Hence they refuse to talk of rural sanitation. **The Safai Vidyalaya,** Ahmedabad, is working mostly on a conversion programme of bucket latrines, which again is an urban concept. **The Institute of Public Health,** Poonamalle (Madras) is also doing mainly extension work in rural areas. Only the **Maharashtra Gandhi Smarak Nidhi,** Pune, has attempted to work in rural areas because of the availability of a large number of subsidies in Maharashtra State for sanitation work, and due to a team of committed workers. Finance is not a problem for the **MGSN** generally.

However, the same (about finance) cannot be said for most rural areas in the country. Hence low-cost options have to be thought of. But with low-cost models, the maintenance of the system, in the long-run, depends primarily on the user and his outlook and attitude. **Safai Vidyalaya,** Ahmedabad, for instance, takes the responsibility for maintenance during the initial period when people are learning to use latrines, but in the long run it is the people's responsibility.

The MGSN, established in 1950, organises training programmes for social and municipal workers on its ongoing projects. Each project runs for a week. It also arranges training programmes in other states. The only condition is that they need to be informed two months in advance. Through the efforts of MGSN, some 50,393 latrines in various urban and rural areas of Maharashtra were constructed up to 1978-79. It also produces pans (for the delivery end of the latrines) together with the **Malpatra Utpadan Kendra,** Amraoti, and the **Sarvodaya Samiti,** Andhalgaon, Bhandra district. These last two organisations are also involved in other work similar to MGSN in rural and urban areas around them.

The Friends Rural Centre, Rasuliya, Hoshangabad, M.P., had initiated the development of water seal latrine pans in 1957 as an extension of the famous Barputti latrine. **The Vidya Bhawan Rural Institute,** Udaypur, has proposals to work on sanitation in rural areas through 35 polytechnics in the country. But its ideas are reportedly vague.

The Kalyani Lutheran World Service (LWS) Settlement, Kalyani, West Bengal, a colony of Santhal tribals has an Oxfam Sanitation Unit installed. About 100 people use it every day. The unit appears to be underutilized. The **LWS** is also working on a low-cost sanitary latrine which is a water seal type dug well only one foot deep and two feet six inches in diameter.

The Centre of Science for Villages, Wardha, displays on its demonstration plot the bachelor's lavatory which is suitable for two or three users and works on septic tank principles. **The Harijan Sevak Sangh,** New Delhi, is a national organisation with Bhangi Mukti and Bhangi Kashta Mukti among its main programmes. The Delhi unit of the Sangh assists in construction of public latrines. **The Gandhigram Institute of Rural Health and Family Planning,** Ambathurai, Madurai, Tamil Nadu, has taken up environmental sanitation work, such as the installation of hand flush latrines in villages in Athoor block, drainage, the provision of a protected water supply and smokeless chullas, etc. These schemes are generally run under the training programmes for sanitation workers, the funds being provided from the programmes. The Institute has a small work shed for the construction of latrine pans, pipes, pit covers etc. These components are supplied to the beneficiaries at a subsidised cost and the knowledge is provided by the training staff. The Institute is attempting to popularise water seal latrines and drainage schemes and the response has been favourable.

According to Shri Bhau Nawrekarji, a pioneer who was responsible for propagating the famous Naigaon latrines. villagers are very suspicious of anyone who wishes to introduce sanitary conditions. They are reminded of the unhygienic conditions of urban latrines on their visits to cities. However, excreta as organic manure holds great interest to people in rural areas. They realise chemical fertilisers alone are not sufficient for better yields. So the way to approach cleanliness and health, says Nawrekarji, is to talk about the wastage of excreta as against its utility as manure. The villagers respond positively to this and not to sanitation by itself. Shri Nawrekar has successfully installed 20 gobar gas plants alongside the latrines.

As the author of the above quoted Oxfam report remarks, most voluntary agencies are inspired by the Gandhian philosophy. "This seems to be an important factor in this field in initiating any programme". Voluntary agencies also enjoy greater freedom in experimenting with low-cost latrines. Some of them have succeeded in doing noteworthy work. Government institutions on the other hand have had little impact. This is because of bureaucracy and a lack of flexibility in their approach. A humane exception seems to be the **Planning Research and Action Institute (PRAI),** Lucknow.

Disposal Systems used in India

Septic Tank

This is a device to break up the sewerage into a sediment and an effluent, both of which can be disposed of safely and without any nuisance. Septic tank systems need more water and are costly to install. A 20-user septic tank without superstructure costs about Rs. 2,500. Therefore, its construction is expensive. Meets technical standards fully. Used extensively in towns where access to a sewerage line is not available. The system has to be emptied periodically.

Bucket Privy

Quite commonly used in many towns in India. Excreta is collected directly in a bucket. Buckets are removed manually or by wheelbarrows, bullock carts, etc. The system as practiced is unhygienic and is a health hazard to the community and to the scavengers particularly. It is quite an inhuman system. Condemns for life, those engaged in scavenging, as social outcasts.

PRAI Type

This type of latrine was evolved at the Planning Research and Action Institute (PRAI), Lucknow. Basically consists of a pit dug into the ground with a depth of six to ten feet. Pit is lined with honeycomb brickwork and cement mortar. Sludge, earth, other minerals, etc. found in faeces, accummulate in this pit. When the pit is full, it is emptied and reused. Pit fills at the rate of one cubic foot per user per year. No danger of ground water pollution in this system unless the water is very high. Pit latrine should not be fitted with a flushing system. By using abundant water, the soil around the pit gets saturated quickly which reduces the life of the pit.

Aqua Privy

This is an improved form of septic tank. Requires less water. Can be built on any kind of soil. Settled solids are removed from time to time. Fresh water is not needed for flushing. Ablution water is found to be sufficient. Aqua privy meets all sanitation requirements from a health viewpoint. Does not require scavenging. Can easily be used in the provision of public latrines.

Bore Hole

Bore hole latrines are constructed by boring a hole about 10 feet deep and nine to sixteen inches in diameter. This system is useful when there is little available space. The life of this style of latrine is short. The bore may be filled within 12 to 15 months when 7 to 10 persons use it regularly. When the bore is filled, a fresh bore is made. Disadvantages : May require special mechanical equipment to bore the hole; chances of subsidence are high.

Sulabh Swach Shouchalaya (Sopa Latrine)

Commonly used in rural areas of Maharashtra. This type of latrine makes use of a special type of pan and has a hinged tin flap at the pan outlet. Flap closes after the passage of faeces into the pit (therefore flies do not hover around). Pit is lined with honeycomb brickwork. The system requires less water and is very popular for its manure content.

Hand Flush Latrine

Consists of an especially made squatting plate in which a water seal pan is incorporated. The seat is installed directly over the pit. This type meets all health requirements. Can be located near or within the dwelling unit. It is simple and cheap to build in rural areas.

Manure Pit

A modification to the hand flush type. Before the latrine is put to use, the pit is partially filled with grass, leaves, paper, etc. for composting. When the pit is filled, it is covered with similar waste materials and a layer of earth. The squatting plate is then placed on a second pit for continued use. Manure from the first pit is taken out after six to eight months.

(*Continued from page 9*)

a solution to many of the problem villages. A large number of such areas are in the rocky areas of the country. Consolidated formations are present in the major part of the country, including almost the entire Indian peninsula which consists of hard rock formations. Such hard rock formations have led to the use of rigs for drilling the terrain in search of ground water, sometimes at depths greater than 100 feet. The exploitation of ground water is the best alternative for the widely dispersed rural communities. Also it is safe and potable even without filtration. This cannot be said of most open wells, rivers, lakes and ponds.

UNICEF's Role

The involvement of the UN Children's organisation—UNICEF-started with the successful use of 11 rigs procured through UNICEF. This was under an emergency programme to provide water supply in the drought affected areas of UP and Bihar during 1967-68. Their continued effective use in the drought affected areas of AP and Bihar led to schemes, involving the government and UNICEF. These schemes require the utilisation of drilling rigs and the utilisation of ground water for the rural water supply programme in a big way.

The assistance from UNICEF continued during the Fourth and Fifth Plan periods. The emphasis was on the supply of drilling rigs, spare parts, accessories, etc. to assist the State Governments in exploiting the ground water. UNICEF has supplied till date more than 200 rigs (There are more than 500 drilling machines today in the country, counting those that are with private agencies and voluntary agencies like the Social Work Research Centre, Tilonia, etc. Many of the States have gone in for purchase of indigenous as well as imported rigs). An estimated number of 40,000 bores have been made by the rigs supplied through UNICEF. This benefits approximately 25,000 villages.

High Breakdown Rate

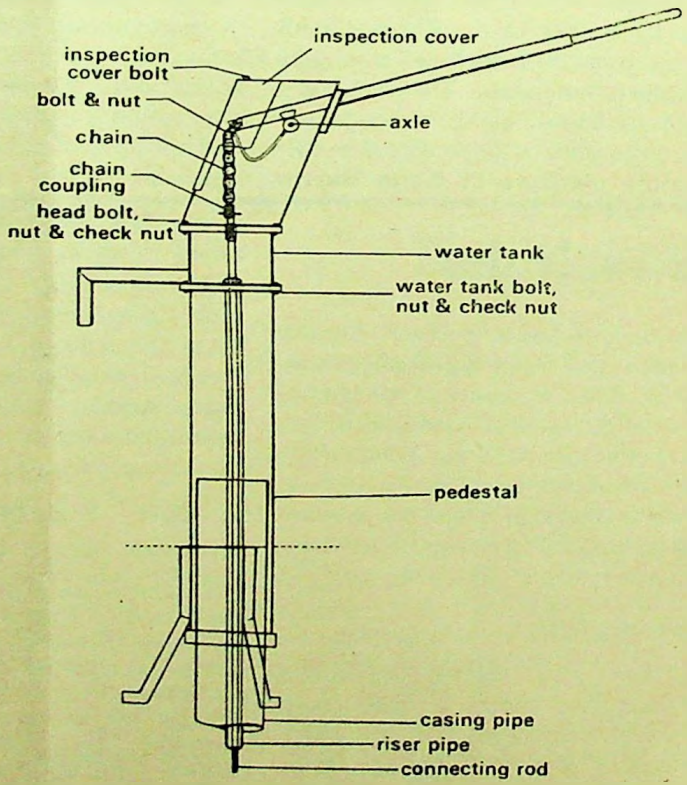
A common feature of the initial years of the Rural Water Supply Programme was the frequent breakdown of the cast-iron pumps which were used to tap ground water. These handpumps were designed for single family use. They were patterned on types earlier used in rural areas in the West. As a result, they were not suitable for community use. The Government of India thus requested UNICEF in 1974 to participate actively in the development of a heavy duty community handpump which could stand up to the strenuous requirements of providing a continuous supply of safe drinking water to a relatively large number of beneficiaries.

Considerable R & D has been invested in India in the Jalna or Sholapur pump: low cost with low maintenance needs. It was first developed at the former Church of Scotland Mission at Jalna in Maharashtra during the late 1960's, and was then taken up at the Sholapur Well Service. Its design has been improved since, and patented to prevent sub-standard pumps being made by other firms or agencies.

The Mark II

Continued efforts of the Government of India, UNICEF, CSIR, WHO, etc. led to the development of the *India Mark II handpump*. This is an improved version of the Sholapur pump. It is an all-steel heavy duty handpump specifically designed for community operation. It is able to function for considerable lengths of time without break-

INDIA MARK II HAND-PUMP



THREE-TIER MAINTENANCE SYSTEM

At Village level

down and/or the need for major repairs.

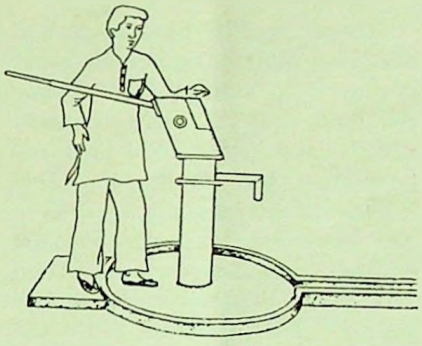
One of the major reasons the old cast iron pumps broke down or were not in operation for long periods of time was poor maintenance facilities. The Handpump Rejuvenation and Maintenance Programme that began in 1974-75 had therefore two aims : replacement of old cast-iron pumps with the India Mark II handpump and developing a maintenance structure.

3-Tier System

The result of the latter was the three-tier maintenance system, first developed as an outcome of drought in Tirunelveli District, Tamil Nadu 1975-76. The system was a success and was adopted by the Tamil Nadu Government for the entire state. Subsequently, the three-tier maintenance system is being adopted in other states of the country as well. The bottom tier is a village handpump caretaker, sometimes called the "barefoot handpump doctor". This person works at the village level on a voluntary basis and is trained to take care of minor maintenance. Whenever a major job is required on the pump, he sends a postcard to the second tier : a maintenance team situated at the block level. The block team is in turn supported by the third tier : an even more well-equipped mobile maintenance team at the district level, Each district has one or more mobile maintenance teams—one team for every 500-600 handpumps.

Costs Accruing

The UNICEF provides rigs for drilling, the India mark II handpumps for pumping the water, and training and advisory services for installation and maintenance. The annual drilling targets are in the range of 150 to 200 wells per year



At block level

per new rig depending upon depth of aquifier, casing required, etc. Till 1980, UNICEF had supplied approximately 40,000 India Mark II handpumps to the various states, and another 16,000 pumps are on order. The State Governments have also placed orders with qualified Indian manufacturers including the public sector unit : National Small Industries Corporation. There are strict ISI specifications for these handpumps. Furthermore, UNICEF has supplied more than 165 vehicles for the mobile maintenance teams.

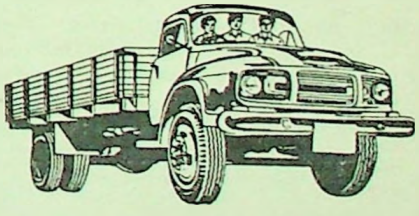
The cost of the Mark II pump inclusive of pump, rod and cylinder is Rs. 1500/-. It costs an average of Rs. 15,000/- to Rs. 25,000/- to drill a 150 feet deep hole of 4-6 inches diameter. In MP the costs are reported to be less for drilling. The annual cost of the three-tier maintenance system has been estimated at about Rs. 1.5 lakhs for 500 pumps. Each India Mark II pump therefore costs about Rs. 320/- per year to maintain which compares with Rs. 500/- to Rs. 650/- required to maintain substandard pumps.

Confidence Again

The design of the pump itself is a matter of great satisfaction to those who were involved. A British Consumers' Association report called it the best of its kind in the world. "The India Mark II handpump and the three-tier system have together once again given us confidence in rural water supply programmes", says a UNICEF official, who earlier faced a barrage of breakdowns and maintenance problems that looked almost insolvable for a long time. The success of the Tirunelveli experiment and the three-tier system has resulted in many State Governments taking a renewed interest in handpumps. Community participation at the village level has been a key factor in the success of the India Mark II pump and the three-tier system.

Improved Health ?

The objectives of the UNICEF and government agencies for drill-



At district level

ing and installation of pumps is to reduce the incidence of water-borne diseases, thereby contributing to a decline in infant and child mortality and morbidity. Specific objectives include : ensuring the continuous availability of a minimum of 40 litres of potable water per person per day; installing one tube-well with dependable handpump for every 250 people; second tube-well and handpump where the population exceeds 250 or a school or health facility exists; and so on. Will health improve thereby?

It may not, and it will not unless improved water supply and sanitation are coupled with health education and community participation. Several diseases generally thought of as water-borne are affected not so much by water quality as by the quantity of water and the manner in which it is used. This is true especially of the water-washed diseases like scabies, skin sepsis, trachoma and fungal infections. Even diseases like bacillary dysentery and various diarrhoeal infections are as much water-washed as they are water-borne. An improvement in the quality of drinking water would not cut down their incidence very much. Improved water supply in some cases, can increase health risks. Lack of drainage can encourage mosquitoes and other disease vectors. In India, the population at risk from filariasis has increased about 20-fold to over 125 million over the past 15 years. One reason is believed to be improved water supplies without drainage systems.

Voluntary Roles

There are other bottlenecks and obstacles in providing potable water to rural communities. One rig can drill more than 100 wells in a year. But the average in India has not been more than 20 till date. This is because the requests for drilling and installation has to be routed through State Governments. Then there are local political forces and groups that interfere with the attempts of well-intentioned, target-oriented government officials. Even when installed, the handpumps continue to be used more by the richer sections of the community and the upper castes. The poor shy away because of caste-domination.

Voluntary agencies could facilitate peaceful choice of a place for the installation of the pump in the village. They could help accelerate the flow of funds and facilities from the various government agencies; ensure community participation and provide the link with health by health education. Some enterprising voluntary agencies in the country have even procured their own drilling rigs. Others could do so, if feasible for them.

(Voluntary agencies interested in implementation could contact for further details : Raymond L.M. Janssens, Project Officer, WES, UNICEF, Lodhi Estate, New Delhi-110003. UNICEF training kits are available to those interested in starting their own programmes).

Ways in which water supply projects can lead to a worsening of the relative position of the poor

- Dominant groups might receive a subsidized service which the poor do not receive, e.g. individual supply to their homes without a corresponding payment.
- Access to the new water supply might be restricted or monopolized. This danger includes cases where the design of the project appears to cover the poor as well, but actual flow is limited or diverted, so that only the dominant group benefits, e.g. by use of water for farming purposes in such quantities that the supply does not reach the homes of the poor.
- Water used for agricultural or commercial purposes by dominant groups may increase their income in ways which are not available to the poor; this can then lead to changes which worsen not just the relative, but also the absolute position of the poor—changes in land tenure, for example, or the discontinuance of arrangements to share food in times of disaster.
- Employment opportunities in the form of water carrying may be lost.
- Equal contributions exacted from all inhabitants for the construction or running costs of the water supply may mean a charge which poor families are in no position to afford.
- Voluntary work demanded at peak times in the agricultural work cycle may lead to a substantial decrease in production.
- The power of the dominant group may be increased by the patronage available, e.g. in the selection of a water supply operator on a salary. At the least, the village-level organization of the programme, in collaboration with a powerful external agency, will be a political resource in terms of prestige.

Excerpted from *Community aspects of rural water supply and sanitation programmes at village level*, Checklist no. 4, by E.L.P. Hessing and P. Kerkhoven, paper presented at the Research Study Group Meeting on Appropriate Technology for Improvement of Environmental Health at the Village Level, New Delhi, 16-20 October 1978. SEA/EH/RSG/ Meet. 1/4, 2a.

COST OF THE WATER DECADE

NEEDS :

1990 population of developing countries needing water supply and sanitation (in millions).

	Water	Sanitation
Urban	640	650
Rural	1,570	1,670
Total	2,210	2,320

COSTS :

Per Capita costs of alternative types of water supply and sanitation (1978 US$)

	Urban	Rural
Water Supply		
with house connection	$120	$150
with standpipe	40	40
with handpumps	—	25
Sanitation		
with sewerage	250	250
with septic tank	100	—
with latrine	30	20

* Both sets of figures are only rough approximations. They are bound to rise further when costs of operation and maintenance are added to installation costs.

SERVICE LEVELS :

Case 1* (100% coverage using 1980 WHO Target Urban Service Standard Distribution)

Urban	Water Supply	70% house connection 30% standpipe
	Sanitation	40% sewerage 40% septic tanks 20% latrine and communal latrines
Rural	Water Supply	20% house connection 40% standpipe 40% handpumps
	Sanitation	80% sewerage 20% latrine

Case 2* (80% coverage with service standard as suggested)

Urban	Water Supply	40% house connection 40% standpipe
	Sanitation	25% sewerage 15% septic tanks 40% latrine and communal latrines
Rural	Water Supply	10% house connection 30% standpipe 40% handpumps
	Sanitation	10% sewerage 70% latrines

SOURCE : World Bank, Basic Needs : Water Supply and Waste Disposal, Dec. 10, 979 pp. 6-7.

Wishing form WASH

The Water and Sanitation for Health (WASH) Project is an USAID sponsored agency which aims to provide centrally-funded services to improve drinking water and sanitation "with a minimum of administrative effort and delay". WASH offers services to, among others, private voluntary organisations in the AID developing countries including India. Its services range from general technical assistance, technology transfer for water supply and sanitation, manpower development and training, and information support. Further in- formation can be had from: Information Director, WASH Project Coordination and Information Center, Room 1002, 1611 North Kent Street, Arlington, Virginia, 22209, USA.

Asking from AFPRO

The Action For Food Production (AFPRO) is a non-profit organisation located in Delhi. It coordinates, supports, evaluates and gives technical guidance to food production projects of non-governmental and voluntary agencies. It works in close collaboration with the Government of India.

AFPRO also receives several enquiries and requests for advice on appropriate technology related to water, irrigation, agri- culture, animal harnessed transport, solar and wind energy, biogas, rural latrines and housing, and recycling of wastes, including polluted waters. For further details, readers may write to AFPRO, C-17, Community Centre, SDA, New Delhi-110016.

A School For Cleanliness

Safai Vidyalaya, Ahmedabad, is housed in Parixit Sadan, named after Parixitlal Mazumdar, one of the pioneers of the Harijan movement. Housed in the Vidyalaya are the many lifesize models as well as miniatures of the different types of latrines, chullas, soakage pits, etc. The Vidyalaya offers trainning facilities to government bureaucrats, voluntary bodies, school and college students, panchayat officials, PWD engineers, sanitary inspectors and others. The Vidyalaya, which acts as an honorary adviser to the Gujarat Government, has been making concerted efforts to motivate communities about the need to participate in their own sanitation by way of Shivirs (camps). Over a lakh bucket latrines were converted in 1969-77. By the end of 1977, some 45,000 were still to be converted. The Safai Vidyalaya's work has proved to a significant extent, that change can be created by determined work.

As a training centre it has an important role. Its concepts are being increasingly accepted even in rural communities. Ishwarbhai, who is the prime force behind Safai Vidyalaya, is an unassuming man, enthusiastic and passionate about his mission. He told VHAI that he would be willing to conduct training workshops in sanitation in English and in Hindi, at any part of the country. Preferably, such workshops would need to be coordinated through the local or state branch of the Harijan Sewak Sangh. The host institution would need to take care of Ishwarbhai's travel, food and stay.

The emphasis behind much of the work of Safai Vidyalaya is the search for technologies that are simple, low-cost and appropriate, those that require less water and are easy to maintain. Readers interested in implementation in their own communities could contact Ishwarbhai, Safai Vidyalaya Harijan Ashram, Ashram Road, Ahmedabad—380027.

—Mira

Container Gardening

In the tropics, where sunlight is abundant, a family with little or no land can produce fresh food right at home—in containers. Container gardening is cheap, allows food to be grown with minimal exposure to chemical substances, and is quick. Ceylon spinach, for example, yields its first harvest in 24 days and seven more harvests within 188 days. One plant can produce as much as 1.8 kilograms of spinach.

All sorts of household items can serve as containers: plastic bags, milk cartons, tin cans, wooden buckets, even old baskets. Fragile containers can be reinforced with wire and string.

Growing Food in Containers in the Tropics discusses sites, soil preparation, plant care, insects and diseases, harvests, choice of plants, and productivity. It has sections on roots and tubers, fruits, vegetables, legumes, spices and condiments, and leaf vegetables. It also rates 11 crops and over 30 varieties suitable for container gardening both inside and out.

Available from: Mayaguez Institute of Tropical Agriculture: USDA; PO. Box 70, Mayaguez, Puerto Rico 00708 USA.

(*Continued from page 8*)

discusses *Management of Solid Wastes in Developing Countries*—refuse collection and transport, sanitary landfills, and composting of urban wastes. Lastly, Arnold Pacey's *Rural Sanitation : Planning and Appraisal* (64 pages, 1980, ITDG) : This is a booklet written for hospital staff and community development workers in third world countries who are planning to start sanitation or hygiene improvement programmes in rural areas.

(The books and references mentioned above can be made available through VHAI on request
—Ed. HfM.)

WE NEED YOU

Doctors

Wanted a Surgeon M.S., F.R.C.S. and Physician M.D., M.R.C.P. for a general hospital with 125 beds. For further information please contact : Administrator, Mercy Hospital, Baridih, Jamshedpur 831017.

Professionals

Hemkhail Trust requires for their rural development project a group of professionals—doctors, agrochemists, geologists, engineers, designers, teachers, sociologists—to work together as a team. Interested individuals/institutions may contact : Mr Yogendra Jain, Hemkhail Trust, 139 Johari Bazar, Jaipur-302003.

DRUGS BULLETIN

DRUGS BULLETIN is brought out by the Department of Pharmacology, Postgraduate Institute of Medical Education & Research, Chandigarh. Editor: Dr. V. S. Mathur.

The Bulletin publishes articles covering drug management of various diseases. Plus its regular features are :

A. From the Desk of the Drugs Controller of India.
B. Generic names/Brand Name/Drug Houses and prices of drugs.

Sample

DRUGS USED IN PULMONARY TUBERCULOSIS

(From July '81 issue: Vol. 4 No. 3)

Generic Name	*Brand Name*	*Drug House*	*Presentation*	*Packing*	*Price Rs. p.*
Streptomycin	Ambistryn-S	Sarabhai	Inj. 0.75 gm.	0.75 gm vial	1.03
			1 gm.	1 gm. vial	1.18
	Merstrep	MSD	Inj. 1 gm.	1 gm. vial	1.18
	Streptonex	Pfizer	Inj. 1 gm.	1 gm. vial	1.57
	Sugacin	HAL	Inj. 0.75 gm.	0.75 gm. vial	1.01
			1 gm.	1 gm. vial	1.19
Isoniazide	Ipcazide	Ipca	Liquid : 100 mg/ 5 ml	120 ml.	7.85
	Isokin	Warner	Tab : 100 mg	100 Tabs.	3.94
				1000 Tabs.	30.38
			Liquid : 50 mg/ 5 ml	200 ml	6.40
	Isokin 300	Warner	Tab. 300 mg.	10 tabs.	1.88
	Isonex	Pfizer	Tab. 50 mg.	1000 tabs.	17.81
				5000 tabs.	82.27
			Tab. 100 mg.	100 tabs.	4.50
				1000 tabs.	30.38
				5000 tads.	144.19
	Isonex Fort	Pfizer	Tab. 300 mg.	30 tabs.	3.41
				1000 tabs.	86.38
	Nidrazid	Sarabhai	Tab. 50 mg.	1000 tabs.	15.43
			100 mg.	100 tabs.	3.51
				1000 tabs.	25.98
				2500 tabs.	60.99

Useful for health personnel with some knowledge of Pharmacology. (Reprints of the more relevant articles can be made available at a later date.)

news from the states

Bihar

Bihar VHA is planning a two-day convention for village health workers of Palamau district at Chandwa on October 2-3, 1981 and a physical assessment workshop from November 2-7, 1981 at Kurji Holy Family Hospital, Patna.

For further details please contact Mr. M. Zaman, Executive Secretary of Bihar VHA at Kurji Holy Family Hospital, Patna-800010.

West Bengal

Community health and development training is prominent in WB VHA's activities and plans. The VHA has already trained 23 Ch trainees. A follow-up meeting is planned for November 1981. WB VHA is also helping to market the goods of voluntary organizations and to solve their marketing problems, and making new posters on health and development.

The future plans of WB VHA include follow-up of trainees and seminars and workshops on human relations, holistic health, school health, health education, community health and development, etc.

In addition, it is also planned to organise three community health develpoment training workshops per year in various districts of West Bengal and a statewide health and development convention once a year.

* * *

Kerala

One of the emerging trends among KVHS members is the increasing interest in holistic health. Holistic health was the theme of their annual general body meeting held on July 29, 1981. Dr. J C Vijayan who had his training in holistic health in the States was one of the key facilitators at the annual general body meeting besides George Ninan of VHAI. There has been a great interest in VHS and Communitv health among the participants of diocesan development seminars, Kothamengalam diocese. KVHS has been invited to conduct orientation programmes in community health for all the community health projects in the diocese.

Uttar Pradesh

A workshop on health and development was organised from September 19-21, 1981 at Rajpur, Dehradun, UP. The workshop was sponsored by various groups working in health, rural development and related fields to share their experiences, problems, etc.

Tunnie Martin, coordinator for the region, is planning another community health workshop at Vigyan Shiksha Kendra head office at Attara, UP, from December 7-14, 1981.

Madhya Pradesh

MPVHA organised a workshop for community and village health workers from April 28 to May 3, 1981. There were 26 participants. The main features were small group discussions, games, exercises, etc. There are also plans to hold a VHW conference during the Dushehra holidays at Bhopal.

* * *

Research and Development Organisation, Tansen Road, Gwalior —474002, has developed a very simple and inexpensive field test for fecal pollution of drinking water, suitable for screening rural water supply systems and large scale screening of urban water supplies. For details write to Dr. J.S. Mahashabde, president MPVHA, Indore Eye Hospital Society, 84 Jawahar Marg, Indore, MP.

New Delhi

VHAI has designed a 15-month course in community health team training. This course emerged from an evaluation of short term courses in community health and development since 1974. The broad objective of this programme is to help prepare teams to participate in building of healthy individuals and health communities through integrated development with emphasis in people's involvement using appropriate and local resources and responding to community needs.

The first training programme begins on September 13 and ends on December 15, 1982. This programme is for the groups working with Bhil tribals in Western India.

The participants will meet at regular intervals for the training and spend a major part of their 15 months in their own place of work implementing what they have learnt. They will be visited by the VHAI team twice during the course. There are 15 participants for the first such programme. The first

Andhra Pradesh

AP VHA's future plans include seminars and workshops on evaluation of nutritional programmes, educational materials, school health, village health workers' convention, etc.

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During July-August '81, AP VHA hosted two extremely successful workshops : Holistic Health and Advanced TA. The Holistic Health workshop was of six days duration and attended by more than 35 participants. The resource team included Sr. Carol Huss and Chinu, Renu, Mira and George from VHAI. The sessions covered all five dimensions of holistic health : self-responsibility, nutritional awareness, social and environmental sensitivity, physical fitness and stress management. There were discussions on biogenics, yoga, foot reflexology, dream counselling and air, water and food pollution. Many of the participants concluded with contracts for change and exciting ideas and plans for implementing it in their respective institutions.

Karnataka

The St. John's Medical College has been subject to major problems for the past one year. Strong differences have emerged between the privately run Catholic Medical College and the Bangalore university. The university has shown a prolonged indecisiveness, according to the college sources, in granting it permanent affiliation, sanction for post-graduate courses, and recognition of the campus hospital as a teaching hospital. A recent action of the university has been to disaffiliate the college and deny it the privileges of the Bangalore university. Through a notification and press release, the first MBBS students who had joined in August 1980 were informed on July 19, 1981 that they would not be permitted to appear for the examinations slated for August 10, 1981.

Meanwhile, St. John's has filed a writ petition in the court seeking among other things permission to the management to continue admissions for 1981-82.

* * *

News

Creative Winners

Health For the Millions joins many grateful people in congratulating Dr. Pramod Karan Sethi for being awarded the Ramon Magasaysay award ("the Asian Nobel Prize") this year for community leadership. Dr. Sethi's Jaipur foot (see "New Hope for Rural Amputees", in *Health for The Millions*, October 1978, for a detailed description) has brought hope to thousands of cripples in the country.

We also congratulate Dr Robert Sperry of the California Institute of Technology for winning this year's Nobel Prize for physiology and medicine. Dr Sperry, who shared the coveted prize with Professors David Hubel and Torsten N. Wiesel, was awarded the prize in recognition of his studies of the brain : "brilliantly succeeded in extracting the secrets from both hemispheres of the brain and in demonstrating that they are highly specialised and also that many higher functions are centred in the right hemisphere." Some consequences of the discovery of Dr. Sperry were explored in our February 1981 issue in "A Kind of Conspiracy".

—Ed. HFM

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Commission for Health and Human Rights

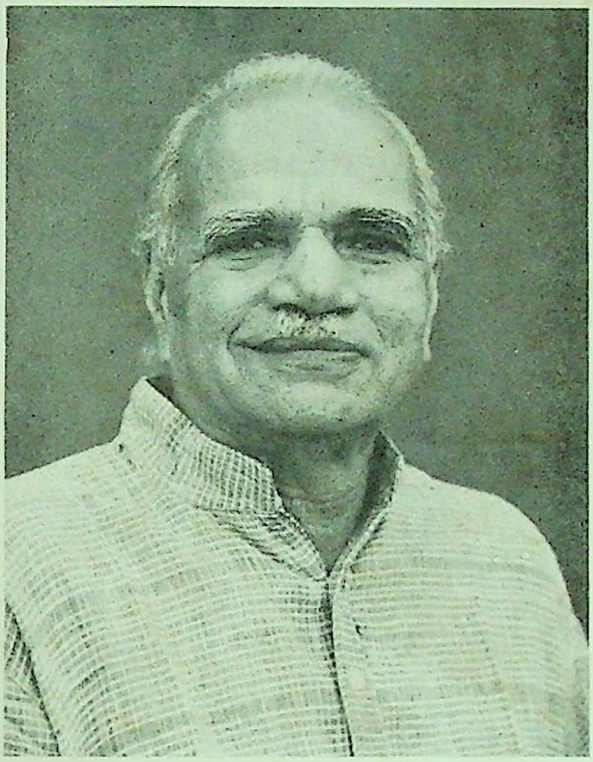
It is accepted in principle that physicians and other health workers can and should be closely identified with the cause of human rights. Now, a formal commission is to be formed : The International Medical Commission (IMC) for Health and Human Rights. A preparatory committee has been set up to pave the way for the commission, which, it is hoped, will be formally established in 1982.

The IMC will aim to secure the widest possible commitment by physicians and other health workers to respect human rights and medical ethics, and to stimulate a high level of vigilance for breaches or failure in observance of these principles. The Commission will investigate situations and cases that do not conform with the established human rights principles, and take action to secure observance of these principles. It will promote education of and exchange of information among physicians and other health workers concerning the ethical principles of health work and human rights. The contact address of the Commission's preparatory committee is : P. O. Box 105, 1225 Chene-Bourge, Geneva, Switzerland.

* * *

J P Naik

(September 5,1907—August 30,1981)



The list of participants at the meeting held in Delhi to condole J.P. Naik's death would read like an Indian Who's Who of education. But it is not only educationists who will miss him.

Naik's concern for the poor, the underprivileged and the oppressed, led him to take a keen interest in the problems of health care especially for the rural areas. He worked as a member on the Shrivastava Committee, Gopalan Committee on Drug Addiction, and on the ICMR—ICSSR Panel on Alternatives in Health. His most significant contribution in this behalf is the report of the study group set up jointly by the ICSSR and the ICMR entitled "Health for All : An Alternative Strategy".

Naik began his working life at the age of five on a farm in a small village, Bahirewadi, in Kolhapur district.

In 1930, he joined the Civil Disobedience Movement and was imprisoned for two years in the Bellary jail. It was during his underground days that he adopted the name J.P. Naik (his earlier name was V.H. Ghotge) by which he has been known ever after. On his release from jail in 1932, Naik started rural development work in a number of villages at Uppin-Betigeri in Dharwar district. Two of the villages in district, namaly, Uppin-Betigery and Kardigud, were awarded the Sir Frederick Sykes Villages Improvement Shield for the Dharwar division in 1937.

In 1940, Rao Bahadur P.C. Patil, who was then Education Minister of the princely State of Kolhapur, invited him to assist in the educational reconstruction of the State. Naik started his work as a part-time Educational Adviser, but soon rose to the position of Development Secretary. Characteristically enough, Naik worked 18 hours a day but accepted no salary. In 1948, he established the Indian Institute of Education. Simultaneously, he established Shri Mouni Vidyapeeth, a rural institute at Gargoti in Kolhapur district.

The next phase of Naik's life began in 1959, when Dr. K. L. Shrimali, the then Union Education Minister, invited him to Delhi to assist him in the task of educational reconstruction at the national level. Naik refused to accept a salary and maintained himself throughout his stay in Delhi on small earnings from lectures, books and other writings. In May 1969, Naik established the Indian Council of Social Science Research and was its Chief Executive for the first nine years.

Naik was not only an institution-builder but also a prolific writer. Concern for the education of the people stimulated most of his writings on education. Between 1942 and 1978, Naik wrote about 30 books and edited five. He wrote innumerable papers for national and international journals in addition to some books and papers in Marathi and Kannada. People who cherish good values in life will continue to find in him an inspiration.

The emblem of the International Drinking Water Supply and Sanitation Decade has the following components.

- The image of a drop, which is readily identified with drinking water and sanitation in all parts of the world.
- Within the large drop, signifying the Decade as a whole, ten small drops represent each year within the Decade.
- The sprinkling, configuration of drops suggests the spreading of drinking water and sanitation services throughout the world, in line with the Decade goal of "clean water and adequate sanitation for all by the year 1980."
- The encircling olive-branch wreath symbolizes the United Nations' supporting and promotional role in the Decade.

International Drinking Water Supply and Sanitation Decade 1981-1990

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