Chapter 8

# Management

This chapter examines the problems associated with managing water utilities responsible for major urban water supplies in Asia's developing countries. It identifies the lack of autonomy of water utilities as one of the core problems leading to secondary problems, such as the caliber and skills of management and staff, the overstaffing of utilities, and the lack of accountability and incentives (including remuneration) to perform. Of course, autonomy is also linked to the ability of a utility to set tariffs in accordance with government policy—and that degree of autonomy is rarely attained. This chapter looks at solutions in the context of good governance, higher tariffs, organization development, reducing NRW, ending intermittent supply, and effective metering of water use.

## A. Current Situation

### Autonomy

The lack of autonomy extended to the management of most Asian water utilities is the strongest factor affecting their performance. This means that matters concerning staff numbers, staff remuneration, and staff recruitment are not decided by service providers. This also means that matters concerning tariffs, on which the financial viability of each utility depends; investment, including extensions of supply (often beyond hydraulic design limits); and disconnection for nonpayment of bills are not decided by the people who are probably most qualified to make these decisions. In short, it means that managers of many utilities are not being allowed to manage.

### Caliber and Skills of Management

The civil servant rules in Asia's developing countries result, in most cases, in seniority or longevity of service leading to promotion to management positions, not management skills or merit and performance. The lack of autonomy extended to management encourages this state of affairs. Men and women who do not rock the boat are supported. Even if managers had the autonomy to manage, many would not have the skills to do so. Most senior positions in water utilities are filled by staff with little, if any, management training.

### Caliber and Skills of Staff

What is found in water utilities in Asia is a heavy predominance of engineering professional staff, many of whom have degrees from universities in developed countries. What is lacking is more qualified professional accountants and financial managers, because the market rates for such people are well above civil servant salary rates. There is a need for more professional staff with backgrounds in sociology, information technology, public relations, and environmental studies. When it comes to professional staff preferences, development (with its associated perks from development agencies) is much more attractive than O&M functions. Indeed, at the field level, O&M staff are often inadequately trained for their jobs. Training is given more to professional staff than to field workers. As a consequence, the quality of repairs and maintenance is not great.

### Number of Staff

Many water utilities are heavily overstaffed, mostly as a consequence of the involvement of elected officials and nepotism. In 1996, for example, the utilities of Delhi, Dhaka, and Faisalabad (Pakistan) had 21.4, 18.5, and 25 staff per 1,000 connections respectively, whereas Singapore, Seoul, and Hong Kong had 2.0, 2.3, and 2.8 staff per 1,000 connections. Overstaffing lowers staff morale, because some staff do much more work than others. Output or productivity is low. Many professional staff also moonlight as freelance consultants, to augment their income. Unions tend to be strong and active when it comes to staff being laid off (regardless of the reason, even wrongdoing).

### Incentives to Perform

There are examples of bonuses given to water utility staff, but this often has more to do with the tariff level and financial performance of a utility than the merit and performance of its staff. In general, there is little incentive with civil servant bureaucracy and civil servant salaries for staff to extend themselves. Promotion, after all, is usually based on seniority, not merit. NRW reduction is often seen as a necessary evil that provides justification for employment. It is not seen as

a challenge associated with bonuses for meeting goals. Incentives relate also to accountability. If there is no accountability for performance, there can be no incentives. In fact, staff incentives often relate to illegal connections, meter reading manipulation, and valve operation for intermittent supply, all of which are associated with staff receiving bribes from the public.

## Measurement of Performance

Some attempt is being made nowadays by water utilities in developing countries to measure indicators of performance, such as NRW, collection efficiency, operating ratio, etc. If, however, managers are not inspired to act on the information collected, staff soon become less enthusiastic about collecting data. Today we have computerization and the ability to carry out in-depth analysis, which can then lead to action, but these tools are not being adequately employed.

## Delegation and Micromanagement

A consequence of the lack of autonomy extended to water utility management is the lack of delegation extended down the line by management to staff. It is not an uncommon sight in South Asia to see the head of a water utility seated at his desk with as many as six telephones at his side. He must answer all questions, even if these pertain to matters that are trivial and should be answered by a division manager. In other words, true management is rare. Good examples of utility management can be found in Bangkok, Malé, Phnom Penh, and Singapore (Malé and Phnom Penh may be further reviewed in the case studies in Appendix 2).

## Billing and Collection

Billing and collection may be improved in many places by making it very easy to pay bills. One way to do this is to have many local outlets where customers can pay bills without having to queue for a long time. In addition, utility fees could be paid daily, weekly, biweekly, monthly, bimonthly, or quarterly, depending on each customer's earning cycle. Another option, which is used in Bangkok and elsewhere, is to encourage consumers to read their own meters and pay on that basis each month. From time to time, those readings must be checked by utility employees.

## Financial Management

Annual audited reports of water utilities have a tendency to surface for public consumption about 3 years after the year of reporting. They are then useless as management tools and of little interest to the public. The annual report of the Metropolitan Waterworks Authority in Bangkok, however, is always in public hands within 6 months of each fiscal year's end. Internal audit offices are often ineffective and inadequate, and external audits, conducted under the auspices of an auditor general's office, tend to concentrate on minor offences and ignore the big picture. It is indeed an unfortunate state of affairs when this situation can apply to $100 million per year businesses being controlled by only one or two qualified accountants. Much more attention needs to be given to utility and project accounting. More transparency is required.

## Water Management

There are often major deficiencies in measuring water production and consumption, but estimates of NRW indicate figures of 30–60% for most Asian cities. As for the breakdown of NRW into its component parts and committed strategies to deal with each of them, few utilities embark on such tasks.

**If you can't measure...you can't manage**

### Working Environment and Incentives

Through transparent policies and independent regulatory bodies, Asia must ensure autonomous water utilities. Then it must obtain free market remuneration for water utility staff, based on accountable, incentive-based, and merit-based performance. While Asian water utilities have many very well-educated professional staff who have been trained in developed countries, their potential has not been realized. The Singapore Public Utilities Board, perhaps the best water utility in the world, gives us a very strong example of how to do it right. It offers strong incentives for staff to perform. Managers are paid more than $150,000 annually. In Bangkok, Metropolitan Waterworks Authority managers are also paid relatively high salaries, which are at least commensurate with those in the private sector. Only when utilities have this type of enabling environment can they go to work on organization development. An example of a successful reform program is shown in Box 8.1.

### Box 8.1 Indonesian Water Utility Rehabilitation

*In 1998 many of Indonesia's 300 municipal water enterprises were, due to rocketing costs of electricity and chemicals, putting untreated water through mains, which could have led to large epidemics. The situation was so bad that some enterprises were planning complete shutdowns that would have devastated the urban poor. The Water Efficiency Team (WET) project quickly created a database and used the information gathered to diagnose the major problems of these enterprises. WET helped small entities create recovery plans and understand the Government's stance. Seventy engineer trainers were trained under the project. These trainers learned about re-rating water treatment plants to increase efficiency, which saved money by eliminating the need for new construction. In one plant, capacity increased from 100 liters per second to 170 liters per second. The savings totaled about $240,000 (roughly four times the cost of the WET project). WET's emphasis on transparency and self-help, instead of capital infusion, has helped the Government shift its water sector development priorities toward full commercialization. The project demonstrated that even small enterprises can become self-funding if proper systems and procedures are implemented.* (Woodcock, 2001)

## B. Organization Development[9]

New organizations are formed and old ones are energized through organization development. Resources are directed to high priorities. Goals are established and translated into jobs that people do every day. Efforts are balanced with available resources. People are rewarded for achievement and initiative. In short, organization development embodies the principles of modern management.

Leadership skills and management skills are important, and they are not the same. In managing change, leadership skills will be more important. Once the organization is up and running, management skills will become more important. Leadership must emanate from the governing body, move to the management group, and filter down into the ranks of the organization. Leaders inspire others and set a good example. The Director of the Phnom Penh Water Supply Authority is an example of such a leader (see case study in Appendix 2). A governing body leads through policy, planning and budgeting, delegation, oversight, and advocacy. An organization must have a clear mission and objectives. It must have a strategy to implement policies. It must start off by analyzing what function it needs to be able to perform and determine what organizational structure is best for that purpose. Then job titles and job descriptions need to be defined. Clearly, the number of employees necessary to do the job will be a key consideration. The management culture needs to include planning, delegation, and management by results. Employee development must be a cornerstone of the organization. This will include professional human resources management, compensation and rewards, training, and creating a pleasant work environment.

Information is needed for management (see Box 8.2 for Bill Gates' views). For a water utility, managers should be provided with data relating to revenue and expenditures, accounts receivable, water production, water consumption, new connections, water availability, number of staff, etc. There is a need to computerize information about every dwelling in a utility's area of responsibility, and whether each dwelling has an official connection. Managers need to know how many people (adults and children) live in the service area, what alternative sources of water

[9] Special acknowledgement to Barnes, 2003.

**Box 8.2 Business @ the Speed of Thought**

(This advice is just as applicable to selling water as any other product.)

- *No one is using information well.*
- *Turn passive data into active information.*
- *You are competing.*
- *Customer service will become the primary value-added function in every business.*
- *Be proactive, not reactive.*
- *It is all about public awareness and transparency.*
- *Knowledge is power.*
- *Companies should focus on their core competence and outsource everything else.*
- *Web lifestyle eases geographic constraints. Knowledge workers can live where they like.*
- *Competition in hiring the best people will increase in the years ahead.*
- *Historical consumer data are a valuable asset.*
- *The speed with which you respond to bad news is critical. Focus on the consumer's definition of good service.*
- *Collect detailed data on consumers and nonconsumers.*
- *Analysis should lead to action.*
- *Use data mining (where computers look for patterns).* (Gates, 1999)

they use, their average monthly consumption from the utility, whether that consumption is metered, how long ago meters were installed, the state of internal plumbing, etc. For this information to be fed to computers, on-the-ground caretakers are needed for zones of up to 500 connections. These caretakers should also maintain detailed information on those not served with a piped supply, including whether or not those without service have applied for connections, what sources they currently use, what their constraints are, when they were told they would be connected, etc. Interface between staff and consumers is important, especially in the field. Performance indicators need to be developed. Utilities can benchmark their performance against other utilities regionally or nationally and also against their past performance. Information technology needs to be introduced to make reporting systems easy, transparent, and able to incorporate feedback. Utilities need strong public awareness and customer service units. Interactive Web sites are nowadays expected. Public and employee safety issues should be addressed.

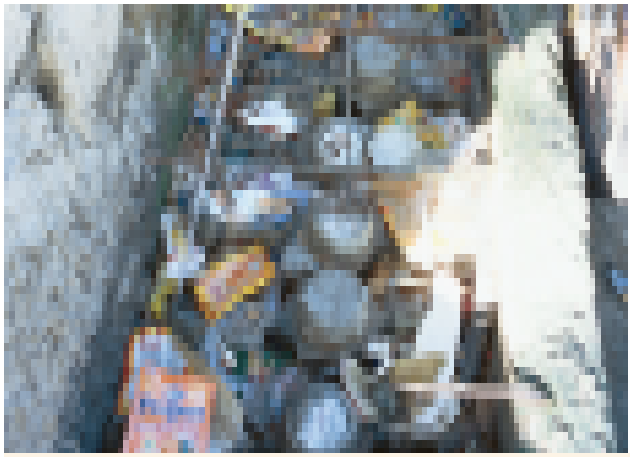
A culture of continuous improvement needs to be inculcated. The Singapore Public Utilities Board, for example, was not satisfied when it had NRW down to 7%. It continued to work on reducing this figure, and it is now less than 5%. Bearing in mind the current culture, a special effort will be required to build up prestige in O&M. Much more effort will be needed in training the hands-on people in organizations and helping them take pride in their performance. Utilities should be encouraged to network informally among themselves. Country, regional, and global water partnerships are flourishing. It would be healthy to take advantage of these to improve utility performance by implementing integrated water resources management, which is the theme of these partnerships. Utility staff can learn a great deal straight from the Internet. For example, reading the articles on a Web site such as *www.watermagazine.com* can be very enlightening. Yes, there is a need for governments to create enabling environments, but there is also a need for professionals to behave responsibly. This will be done when they promote learning, share information with government agencies, and inculcate professional ethics.

There is probably nothing so guaranteed to lift the morale of water utility staff as tariffs being high enough to ensure that utilities are financially viable. There are also few excuses for not having excellent information, on which management decisions can be based. Computerization has made all of this possible.

## C. Metering

It has been said that if you cannot measure, you cannot manage. Moreover, if a job is worth doing, it is worth doing well. These statements are true in water and metering. So, wherever there is 24-hour supply, there should be 100% metering, and all meters should be in working condition. Where intermittent water supply exists, a plan to gradually increase 24-hour coverage should be set in motion. Likewise, all groundwater extraction by industry should be metered and charged if that resource is to be controlled and maintained.

**Are these read?**



**Water meters—how many are working?**

**Meter all or nothing**

**A need for construction standards**

Meters must be of good quality and should be replaced regularly (about every 5 years). The large users of water should be accurately metered, and the meters used might need to be replaced every 2 or 3 years. To some extent, it must be acknowledged that when tariffs are very low (as they are in most of South Asia) metering is somewhat irrelevant, as the cost of maintaining and reading meters may be more than the water bill itself.

When it comes down to estimating consumption where metering is absent, such as on standpipes, it is quite simple to meter a number of standpipes for a short time and extrapolate the results for others. The same holds true for household connections that are not metered. Pump hours run compared with the pump performance curve is often used to estimate production volume. This, however, is not a long-term recommendation. When it comes to production, there are almost no excuses for not having good metering. The accuracy of any assessment of NRW is important, especially when the result is to be used for monitoring improvement in performance.

It is estimated that two thirds of household water consumption and almost 100% of industrial consumption in Organisation for Economic Co-operation and Development member countries are now metered, and meter penetration continues to expand in most other countries (OECD, 1999). Certainly, in countries like Australia and New Zealand, metering consumer connections has recently been deemed necessary in reducing water use.

## Management (Problems) in a Nutshell

- There is a lack of autonomy of utilities.
- Revenue (tariffs) is affected by political considerations.
- Utilities are overstaffed.
- Management skills are lacking.
- Accountability is needed (annual reports + 3 years).
- Civil servant rules and civil servant salaries are ineffective.
- Public relations are poor, and there is a lack of awareness among consumers.
- O&M functions are treated as "project" capital works.
- High rates of NRW, intermittent supply, and standpipe service need to be addressed.
- Construction standards are poor.

## Management (Solutions) in a Nutshell

- Policies must provide autonomy and revenue (tariffs).
- There should be accountability through regulatory bodies and annual reports.
- Organization development is necessary.
- If you cannot measure, you cannot manage.
- Incentives must be linked to performance.
- Use open market salaries for professionals.
- Give O&M prestige.
- Interface between staff and consumers should be given importance in the field.