Chapter 6
Conclusions and Recommendations

Conclusions

After the account and discussion of the collected information all along the report, a clear picture has been drawn regarding water supply situation in Samaesarn subdistrict. Returning to the questions raised in Chapter 2 it can be concluded that the most urgent need of the population in Samaesarn subdistrict is the enlargement of the water distribution system to supply all the households in the community. A very important point too, is the distrust of the population in the quality of piped water for drinking. These two points combined are the cause of the present situation in which a basic need like the access to a reliable, safe and reasonably cheap water supply is not fully covered.

Although people interviewed in Samaesarn subdistrict seem to be quite satisfied with the water supply service, a lot of complaints regarding water appearance, water distribution service and attention to the consumers have been reported. The relative satisfaction of the population with connection to piped water, in spite of all the reported problems regarding piped water supply, is due to the fact that to have connection to piped water represents a great improvement in the quality of live in comparison with those people that cannot connect to the system.

Regarding responsibilities of different authorities involved in the planning, operating and management of the water supply system in Samaesarn subdistrict, an overlapping of duties have been observed. This fact obstructs the making of decisions and the actions in the piped water distribution system expansion and improvement.

The main responsibility of PWA in Samaesarn subdistrict should be to assure the access to piped water to all the people in the community. PWA, at the present, is not meeting this responsibility and not even Universal Utilities Co. Ltd., which has taken on the management of Sattahip waterworks from PWA. As its main responsibility in Samaesarn subdistrict, PWA should have assured the completion of Samaesarn piped water distribution system by Universal Utilities Co. Ltd. in the leasing contract signed with the private company, in the case that PWA could not face this duty. Regarding Universal Utilities Co. Ltd. responsibilities, all the complaints regarding water supply service and water quality collected in Samaesarn subdistrict during the carrying out of the interviews prove that there are still a lot of problems to solve in the management of Samaesarn distribution system to provide a satisfactory service.

From Universal Utilities Co. Ltd. policy described in point 3.2.3 it can be observed that all the duties, responsibilities and goals of the company described in its policy are quite far away from the actual needs and problems
regarding water supply in Samaesarn subdistrict. Although the setting up of SCADA and GIS systems, and the technological advances that the company is carrying out or is planning to carry out in the future represent an improvement in the management of the waterworks, the company seems not to take into account the problems and needs of the users in Samaesarn subdistrict within its goals.

**Recommendations**

As it has been mentioned in the conclusions, the most urgent need of the population in Samaesarn subdistrict is the enlargement of the water distribution system to supply all the households in the community. The responsible authorities, PWA, Universal Utilities Co. Ltd. and Samaesarn municipality, seem not to be able to solve this problem in a short period of time because of budgetary problems, or because they give priority to other targets. An interesting solution to the problem could be the starting-up of a loan system for those people that do not have enough means to pay for the piped water connection. In this way, people willing to connect to the piped water system could ask for a loan to Universal Utilities Co. Ltd. to pay the connection fee and the construction of the secondary pipeline. This loan would be paid back in small monthly instalments included in the water bill. Other possible solution to this point could be the agreement between Government and Universal Utilities Co. Ltd. to modify water prices. In this way Universal Utilities Co. Ltd. could take on the expansion of the distribution system to supply all the households in the community facing up to this important investment with the increase of the water prices. In this case, an accurate economic study should be carried out to assure the viability of this measure. As population in Samaesarn subdistrict have not a high income level, a study of “willingness to pay” should be also carried out to calculate the maximum increase of the water price that would be accepted by water users. Anyway, government or PWA should control the increase of water prices as the access to reliable, safe and reasonably cheap water supply is a basic need.

The low confidence of piped water users in piped water for drinking is due both to a cultural factor (people believe that piped water is not good for drinking), and to the appearance and taste of piped water (a lot of complaints about sediments, colour, odour and taste have been collected in Samaesarn subdistrict). Regarding the cultural factor maybe could be useful to launch a project similar to the project “Safe Drinking Tap Water” launched by PWA in some of its responsible areas, to build up a confidence in the standard of hygiene and safety of piped water, and to encourage more people to drink piped water. To improve the appearance and taste of piped water it would be necessary to better control turbidity in the production of drinking water to reduce this parameter at outlet from the treatment plant. It would be necessary as well to reduce turbidity of tap water by improving the watertightness of the distribution system, and maybe by changing some of the pipelines.
To speed up the making of decisions and the actions regarding water supply, the responsibilities of each authority involved in the process should be clearly defined and overlapping should be avoided. The overlapping of responsibilities in the field of water supply is observed in the draft of the new government’s privatisation policy. A reorganization of the different authorities involved in the water supply field in Thailand, and a redefinition of their responsibilities are included in the draft, but this policy has not been approved by the Government yet.

Regarding the management of the waterworks, some recommendations could be made:

- From some of the complaints collected in Samaesarn subdistrict, and from the talks with the staff at the Universal Utilities office in Sattahip, it seems necessary and important to increase the qualified personnel to provide a better service to the users.

- The planning in the expansion of the distribution system is basic to obtain a good operation and an efficient system. Although the expansion of the system will be constructed in different periods, a global planning of the distribution system should be done.

- In the control and reduction of water losses and non-revenue water, it is very important to check all the “irregular” meter readings mentioned in point 5.3, as they can be caused by leakage, broken meters, or any other kind of damage that should be repaired.

- As Universal Utilities Co. Ltd targets seem to be quite far away from the actual needs of the population in Samaesarn subdistrict, it would be interesting to take into account some of the problems raised in this report to better meet these needs.

Although the problems raised in this report are real problems in Samaesarn subdistrict, the collection of information to elaborate this report has been done in a very short time and interviewing a small sample of the population. It would be interesting to carry out another survey interviewing a larger sample of people to obtain more representative figures and maybe to detect some other possible problems that have not come out in this study.