Chapter 1
Introduction

The initial aim of this Master Thesis was the development of a guide for water supply projects in developing countries. To learn what is really a developing country and what are the problems that people working in water supply projects have to face, Professor Jens Aage Hansen from Aalborg Universitet (Denmark) proposed me the possibility to do a project in Thailand under the supervision of Professor Prayoon Fongsatitkul and Suwisa Mahasandana from Sanitary Engineering Department at the Faculty of Public Health of Mahidol University (Bangkok).

The initial idea of what could be an interesting problem to study in Bangkok related with water supply was developed in Aalborg with the help of some readings about water supply situation in Bangkok Metropolitan Area (BMA) and after some interesting discussions with Professor Hansen and Dr. Tjalfe Poulsen.

It was planned to study the water demand and the water consumption in Bangkok Metropolitan Area according to the standard of living. A shortage of quality water in the BMA was anticipated because of the pollution of the main surface source, Chao Phraya River, and the prohibition to withdraw groundwater because of land subsidence problems. Regarding this situation it seemed interesting to carry out a study about water demand for different uses in different areas of BMA and try to identify basic and possible excess consumption of water.

Once in Bangkok the original idea had to be modified. Metropolitan Waterworks Authority (MWA), the state enterprise that takes care of water supply in BMA, has already carried out projects about water demand in different areas; also the available time to do the project, about 2 months, seemed too short to carry out a study of these characteristics. After a discussion with Dr. Prayoon and Professor Suwisa we agreed that the new proposal could be to study the water demand and consumption in a small town outside BMA (Amphoe Sattahip) and to compare the obtained data with similar data from MWA. However, the water consumption data obtained from MWA were very general and considered only one category of domestic users without differentiating areas with different socio-economic characteristics. This fact made useless the comparison because of the impossibility to find water consumption data from a similar area to Amphoe Sattahip. Then, the aim of the project was changed to a study of water consumption in Amphoe Sattahip without comparing the obtained data with any other similar data.

In the first visits to Samaesarn, a subdistrict of Amphoe Sattahip where the project has been carried out, and during the fieldwork some interesting problems came out. On the one hand there are people who still not have connection to piped water (about 60 % of the households in Samaesarn subdistrict) and use other sources of water like private vendors, wells, and
rainwater. These alternative sources supply poor-quality water and in the case of private vendors the price per cubic meter is higher than the price of piped water. On the other hand there are people with connection to piped water that complaint about the reliability of the service. It is also very interesting that a high percentage of the people with connection to piped water does not trust in its quality for drinking and still drink bottled water and even rainwater. Managing this situation there is a private company, Universal Utilities Company Limited, that has advanced technology like GIS system or SCADA to monitor and manage all the waterworks system.

On this background I decided that it was more interesting and maybe more necessary to assess some of the problems related with water supply in the area, instead of study water demand and water consumption in general. In this way the definitive aim of the project became an assessment of the actual situation regarding water supply and user needs in Samaesarn subdistrict.

With the introduction of the study carried out in Samaesarn subdistrict, the initial aim of the Master Thesis has change a little. The initial idea of developing a guide for water supply projects in developing countries has become a chapter of recommendations and lessons learned, based on the experience in Samaesarn subdistrict and on some specialized readings.