Introduction

> Water scarcity is noticeably increasing [in many developing countries] due to the inadequate response by water sector actors and strategies to high population growth, rapid urbanization, industrial development and the expansion of irrigated agriculture, generally with negative impacts on soils and watercourses (BMZ 2009: 8).

In Yemen, water scarcity plays a central role in the development. Water scarcity and over-exploitation of aquifers are not only the most complex development challenges in Yemen, but they further impact all other fields of development. Water is the basis for sustainable development and has strong links to economic development, (girls') education, public health, and state stability. Further, water becomes more and more a subject of conflicts.

The water crisis in Yemen was first recognized in the mid 1980s when the critical equilibrium of available water resources and domestic water consumption began to break down. Due to an incentive structure that made water affordable for intensive agricultural use and rising demands for domestic water consumption, caused by a high population growth and rural-urban migration, the groundwater became increasingly overexploited (Ministry of Water and Environment 2004: 4-5, Gerhager/ Sahooly/ Safan 2009: 7-8). Thus, Yemen is set to be one of the first countries of the world to run out of water (Evans 2009).

For Sana'a, the capital of Yemen, the Yemeni Government and experts agree that at current rates the wells will run dry in about ten years. The water shortage is becoming more and more critical and is driving civil unrest. Families easily pay half of their income for water. The water available per person per year across Yemen amounts to between 100 to 200 cubic meters.

This is far below the international water poverty line (CEH 2005, Water Monitoring Alliance 2005) of 1000 cubic meters (Evans 2009).

Therefore, in the early 1990s a reform process of the Urban Water Supply and Sanitation (UWSS) was initiated to tackle the water crisis in Yemen. In 2000, the Local Administration Law N°4 was issued, aiming at the implementation of a pro-decentralization policy. This law and law N°35, which was amended by law N°7 in 1997, paved the way for fostering decentralization of the water sector in Yemen, decentralization being the spearhead of the UWSS Policy and Strategy Reform Agenda, initiated by cabinet resolution 237, in November 1997 (Gerhager/ Sahooly / Safan 2009: 11).

Since the reform process and decentralization of the UWSS began, the centralized structures of the National Water and Sanitation Authority (NWSA) have gradually been and continue to be replaced by a decentralized system of local corporations (LC) of UWSS, LC branches and autonomous urban water supply and sanitation utilities (AUWSSU).

As most academics and development stakeholders today have universally come to recognize the importance of good governance practices to alleviate poverty and conduct institutional change, they have increasingly turned towards the practice of decentralization. Decentralization is widely discussed within the political context of development aid. Decentralization reforms have been among the most important aspects of state modernization in developing countries, moving the research focus to the institutional setting of the state. "It is estimated that 80 percent of developing countries including the transitional economies of Eastern and Central Europe are experimenting with some form of decentralization" (Xavier 2001, cited in Work 2002: 9).

Given this background, this research paper aims to analyze the decentralization process of the Yemeni UWSS from 2000 to 2009 to determine if decentralization has improved the UWSS in Yemen. From arguments that are to be discussed in this research paper, it is assumed that decentralization impacts on the efficiency of UWSS, hence increases the number of households connected to the UWSS, raises the amount of wa-

ter available per household and decreases the cost of water supply and sanitation for the urban population.

More precisely, the research paper seeks to answer the following empirical questions:

1. Did the number of households connected to the UWSS system increase since the LCs and AUWSSUs have replaced the NWSA branches?
2. Has the amount of water available per household increased since the LCs and decentralized public utilities at the local level are in charge of the UWSS?
3. Did the cost of UWSS (water and sanitation fees) decrease for the household?
4. Has decentralization contributed to improve administrative coordination and to clarify responsibilities and competences between concerned institutions?
5. Did the sequence of different forms of decentralization have an impact on the performance of the LCs and decentralized public utilities at the local level?

A qualitative research was conducted during a field research from October to December 2009. Major laws concerning the decentralization process in Yemen, reform programs of the UWSS, and studies about the Yemeni water sector were analyzed and expert interviews with representatives of the GTZ Technical Secretariat in the Ministry of Water and Environment, of the United Nations Development Program Decentralization and Local Development Support Project (DLDSP), and of the Ministry of Local Administration (MoLA) were conducted. In addition, informal meetings with the staff of the German Technical Cooperation (GTZ) Water Sector Program and representatives of NWSA were conducted.

Decentralization is widely discussed in the literature. However, studies related to decentralization in Yemen mainly concentrate on fiscal decentralization. The UWSS has been evaluated in regards to the general reform process and the consolidation of the decentralization process. However, the related studies do not embed the empirical outcomes in a theoretic concept. Thus, this research paper seeks to make the linkage

between the theoretical framework and the empiric outcomes of decentralization in Yemen.

The structure of the paper follows several steps. **Chapter One** presents theoretical and practical pre-considerations. **Chapter Two**, in the frame of a literature review, displays a historical as well as conceptual placement of the decentralization concept and illustrates the genesis of decentralization in the political debate of development aid. The framework of decentralization is illustrated to derive a theoretic approach for the analysis of the UWSS. **Chapter Three** limits the wider decentralization concept to a concrete working definition and introduces different dimensions, forms, and sequences of the decentralization to derive the hypotheses of the research. **Chapter Four** illustrates the success criteria of decentralization. **Chapter Five** introduces the Yemeni context and analyzes the major laws regarding decentralization. **Chapter Six** briefly illustrates the concept of UWSS, presents the Yemeni water sector, and analyzes the reform and decentralization process of the UWSS in Yemen. Based on the previous analysis, **Chapter Seven** presents and interprets the findings, places the decentralization process of the UWSS into the previously derived categories, and seeks to illustrate whether between 2000 and 2009 the UWSS was improved through decentralization. As this study is prepared to obtain a diploma, the German equivalent to the Master of Political Science, it has to integrate two subdivision of political science. Therefore, this paper illustrates in detail the framework and theoretical approaches to decentralization before analyzing decentralization in Yemen, in order to integrate both political theory and international relations into the paper.