

Chapter 4

Water Security in Saudi Arabia



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Abstract Water is critical for economic and social development in Saudi Arabia (KSA). It is essential to meet basic human needs, manage the environment, and sustain economic growth. However, despite the water scarcity and importance, the KSA faces severe challenges due to the unsustainable use of water resources. This chapter aims to comprehensively analyse water status in KSA concerning water resources, uses, security, policies, regulations, technologies, and prospects. The collected data used in this study were mainly from the published reports by the KSA Ministry of Environment, Water and Agriculture (MEWA). Also, the study analysis benefits from the most recent literature covering different water sector disciplines in KSA and similar regions. Based on the current status of water resources in KSA, the study suggested a conceptual framework which can be used to implement the water sector strategy established by the MEWA. The framework can set the problems, aims, procedures, services, action plans, and system monitoring for the water sector in KSA.

Keywords Policies and regulations · Saudi Arabia · Sustainability · Water sector · Water uses · Water security

1 Introduction

Water is vital for agriculture but also for industrial and tourism, social life, and nature conservation (Hussain et al. 2019). Water resource management in the twenty-first century faces complex problems as it is the most crucial resource for producing food

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