Titel: Cotton, Water, Salts and Soums

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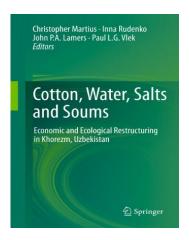
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Economic and Ecological Restructuring in Khorezm, Uzbekistan

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This book summarizes a long-term research project addressing land and water use in the irrigated areas of the Aral Sea basin. In an interdisciplinary approach, natural and human sciences are combined to elucidate the challenges of economic transition that affect the use of land, water and biological resources, ecological sustainability, economic efficiency and the livelihoods of the local population. The research focuses on Khorezm, a region in Uzbekistan, located on the Amudarya river, in the heart of Central Asia. A series of chapters describes the biophysical environment and the aspects of society and institutions that shape land and water use. The book discusses options and tools to improve land and water management, and to reform the economic system management, based on agronomic, hydrological, economic ans social studies and modeling. The insights are not only important for Uzbekistan, but for all countries in transitions and irrigated dryland areas elsewhere.

This book summarizes results from a long-term research project addressing land and water use in irrigated areas of

the Aral Sea basin. In an interdisciplinary approach, natural and human sciences are combined to elucidate challenges of economic transition that affect the use of land, water and biological resources, ecological sustainability, economic efficiency and the livelihoods of the local population. To address the linkage between human and environmental security, the project took an interdisciplinary approach to the complex environmental issues in Central Asia and the Aral Sea Basin. The challenges are reflected in the mounting land degradation caused by water over-use and soil salinization in an area dominated by cotton, wheat and rice production. This threatens food security, agricultural incomes, rural livelihoods and thus, human security.

The book focuses on Khorezm, a district of Uzbekistan, located in the heart of Central Asia. This region receives all the irrigation water it needs for agriculture from the Amudarya river, the ancient Oxus. Various contributions describe first the biophysical environment and the aspects of society and institutions that presently shape land and water use. Other chapters discuss options for adaptively improving land and water management. Based on economic studies and modeling, options are discussed of how to reform the economic management of the agricultural production system, for the benefit of humans and nature in the region. The international team of authors analyzes, in 22 chapters, how to best address, mitigate, adapt to, and achieve resilience of the agricultural landscape under the rapidly changing environmental and economic framework conditions. The book relates applicable knowledge that supports integrated, agriculture-oriented development, not only in Uzbekistan, but also in other regions of Central Asia, in all countries in transition, and in irrigated drylands in general.