

1. Record Nr.	UNINA9910502646503321
Autore	Dohmann Max
Titolo	Chinese Water Systems : Volume 4: Applied Water Management in China // Max Dohmann, Martin Grambow, Yonghui Song, Paul Wermter
Pubbl/distr/stampa	Cham, : Springer International Publishing AG, 2021
ISBN	3-030-80234-5
Descrizione fisica	1 online resource (293 p.)
Collana	Terrestrial Environmental Sciences
Altri autori (Persone)	GrambowMartin SongYonghui WermterPaul
Soggetti	Water quality management - China Water - Pollution - China Water reuse - China
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Intro -- Introduction -- Contents -- About the Editors -- 1 Improving Water Management and the Water Management System in the Liao River Basin and Lake Dian -- 1.1 Structural Indicators -- 1.1.1 Development of Innovative 3D Water Governance Models for Kunming City and Bavaria -- 1.1.2 Water Governance Structural Characteristics of Kunming City and Bavaria and Their Comparison -- 1.1.3 Conclusion -- References -- 2 Ecological Indicators for Surface Water Quality - Methodological Approaches to Fish Community Assessments in China and Germany -- 2.1 Introduction 2.1.1 The Need for Ecosystem Health Assessment -- 2.1.2 Current Situation in China and Germany -- 2.1.3 Ecological Indicators of Ecosystem Integrity -- 2.1.4 Biological River Assessment Approaches Applied in China and Germany -- 2.2 Methodological Comparison of Fish Community Assessment -- 2.2.1 Methodology -- 2.2.2 Results -- 2.3 Discussion -- References -- 3 Dianchi Shallow Lake Management -- 3.1 Introduction -- 3.1.1 Conceptual Thoughts Connecting Water Management and Shallow Lake Management -- 3.1.2 Two Studies for One Goal -- 3.2 Study 1: Water and Sediment Monitoring Data Acquisition

3.2.1 Research Area -- 3.2.2 Materials and Methods -- 3.2.3 Results and Discussion -- 3.3 Study 2: Shallow Lake Modelling of Lake Caohai -- 3.3.1 Theoretical Foundation and Adoptions -- 3.3.2 Data input and model parameterisation -- 3.3.3 Model simulation scenarios -- 3.3.4 Caohai Shallow Lake Model Results -- 3.4 Summary and Recommendations for the Dianchi Shallow Lake Management -- 3.4.1 Shallow Lake Management - A Very Special Task -- 3.4.2 Necessity for Highest Data Quality -- 3.4.3 Recommendations of Most Promising Management Scenario for the Lake Management -- Annex Annex 3.1: Full Compares Between Aerobic and Anoxic Milieu -- Annex 3.2: Relevant Parameters and Variables of StoLaM Used in the Lake Caohai Simulation Study -- References -- 4 New Technical Approaches for the Co-processing of Pharmaceutical Wastewater in Municipal Wastewater Treatment Plants in the Shenyang Region -- 4.1 Introduction -- 4.1.1 New Approaches for the Co-treatment of Municipal and Industrial Wastewater -- 4.1.2 State of Wastewater Treatment and Upgrading Plan in China and Shenyang -- References 5 The Planning, Management and Decision Support Systems of Kunming's Urban Drainage System -- 5.1 Overview -- 5.1.1 Chinese Policy Background -- 5.1.2 Current Status and Problem Analysis -- 5.1.3 Methods -- 5.2 Managerial Decision Support System of Urban Drainage System -- 5.2.1 Data System -- 5.2.2 On-line Monitoring System -- 5.2.3 Model Simulation System -- 5.2.4 Performance Evaluation System -- 5.3 Progress in Practical Application -- 5.3.1 Data Construction and Application -- 5.3.2 Online Monitoring Application -- 5.3.3 Model Evaluation and Decision -- 5.3.4 System Joint Operation 5.3.5 Summary of Application Benefits

Sommario/riassunto

This open-access book addresses latest Sino-German results of the joint research efforts within Major Water Program of the Chinese Government supported by German research funding. The Major Water Program aims at the restoration of polluted water environments and sustainable management of water resources in China. The joint BMBF-CLIENT project SINOWATER deals with three most significant and strongest polluted Chinese waters, the river Liao and the Dian-lake as well as Tai-lake in the area of the metropolises Shenyang, Kunming and Suzhou, respectively. The project was conducted by the Research Institute for Water and Waste Management at RWTH Aachen (FiW) e.V., Bavarian State Ministry of the Environment and Consumer Protection, Technical University of Munich, RWTH Aachen University, German and Chinese companies (Martin Membrane Systems AG, Steinhardt GmbH Wassertechnik, GuHong, JT-elektronik, bluemetric, Huawang Water, EVU Group, Atemis GmbH, i+f process GmbH) in close cooperation with Chinese Academy of Environmental Sciences, Tongji University, and the Dianchi Lake Management Authorities. Overall, the joint Sino-German research project SINOWATER provided solutions for the improvement of the water quality in the mentioned water bodies as well as development and optimization of Good Water Governance. These objectives could be achieved through the implementation of innovative German water technologies and the optimization of water management elements in the fields of industrial and municipal wastewater treatment as well as river and shallow lake management.
