1. Record Nr. UNINA9910299452203321 Autore Zardari Noorul Hassan Titolo Weighting Methods and their Effects on Multi-Criteria Decision Making Model Outcomes in Water Resources Management [[electronic resource] /] / by Noorul Hassan Zardari, Kamal Ahmed, Sharif Moniruzzaman Shirazi, Zulkifli Bin Yusop Cham: .: Springer International Publishing: .: Imprint: Springer. . Pubbl/distr/stampa 2015 **ISBN** 3-319-12586-9 Edizione [1st ed. 2015.] Descrizione fisica 1 online resource (173 p.) Collana SpringerBriefs in Water Science and Technology, , 2194-7244 Disciplina 55 550 551.4 553.7 Soggetti Physical geography Environmental management Hydrogeology Earth System Sciences Water Policy/Water Governance/Water Management Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references. Nota di contenuto Contents; About the Authors; Abstract; 1 Introduction; 1.1 Introduction; 1.2 Problem Background; 1.3 Problem Statement; 1.4 Objectives of the Study; 1.5 Scope of the Study; 1.6 Significance of the Study; 1.7 Chapter Summary; 1.8 Report Organization; 2 Literature Review; 2.1 Introduction; 2.2 Decision-Making Process; 2.3 Multi-Criteria Decision-Making; 2.4 Classification of Multi-Criteria Decision-Making Methods; 2.5 Characteristics of Different Multi-Criteria Methods; 2.6 Strengths and Weaknesses of MCDM Methods; 2.7 How to Select an Appropriate MCDM Method 2.8 The Role of Weights and Their Interpretation in MCDM Methods2.9 Classification of Weighting Methods: 2.9.1 Subjective Weighting

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Sommario/riassunto

This book provides a systematic way of how to make better decisions in water resources management. The applications of three weighting methods namely rating, ranking, and ratio are discussed in this book. Additionally, data mining on keywords is presented using three popular scholarly databases: Science Direct, Scopus, and SciVerse. Four abbreviated keywords (MCDM, MCDA, MCA, MADM) representing multicriteria decision-making were used and these three databases were searched for different popular weighting methods for a period of 13 years (2000-2012). The book provides also a review of weighting methods applied in various multi-criteria decision-making (MCDM) methods and also presents survey results on priority ranking of watershed management criteria undertaken by 30 undergraduate and postgraduate students from the Faculty of Civil Engineering, Universiti Teknologi Malaysia.