Record Nr. UNINA9910366630403321 Autore Jayarathne Ayomi Titolo Transformation Processes of Metals in Urban Road Dust: Implications for Stormwater Reuse / / by Ayomi Jayarathne, Buddhi Wijesiri, Prasanna Egodawatta, Godwin A Ayoko, Ashantha Goonetilleke Singapore:,: Springer Singapore:,: Imprint: Springer., 2020 Pubbl/distr/stampa **ISBN** 981-15-2078-X Edizione [1st ed. 2020.] Descrizione fisica 1 online resource (VI, 50 p.) Collana SpringerBriefs in Water Science and Technology, , 2194-7244 Disciplina 363.7394 363.73946 Soggetti Water pollution Water quality Engineering geology Engineering—Geology **Foundations** Hydraulics Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution Water Quality/Water Pollution Geoengineering, Foundations, Hydraulics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Chapter 1: Metals in urban stormwater environments -- Chapter 2: Research design -- Chapter 3: Metal transformation and stormwater quality -- Chapter 4: Risk evaluation based on the metal transformation and bioavailability -- Chapter 5: Practical implications and recommendation for future research -- Appendices -- Index. Sommario/riassunto This book discusses the physicochemical changes (transformations) that metals deposited on urban road surfaces undergo during dry weather periods, in order to provide insights into their potential impacts on stormwater quality. Based on extensive field experiments.

and laboratory and data analyses, it examines transformation

characteristics of metals with respect to the particle size of road dust, antecedent dry days and land uses. Further, it proposes a new risk-

assessment methodology, improving the original human health-risk indices based on the transformation characteristics and potential bioavailability of metals in order to evaluate the risks posed by metals in stormwater. This book is of interest to researchers and decision-makers developing appropriate pollution mitigation measures to enhance the quality of stormwater, targeting the effective reuse of stormwater in urban areas.