

# Foreword

Urbanization – coupled with improved living standards, population increase, and economic development – is generating ever greater volumes of wastewater. Once stigmatized as a waste, wastewater is increasingly recognized as a valuable source of water, nutrients, organic matter, and energy. When managed safely, wastewater supports agricultural production and industrial needs in urban and peri-urban areas and contributes to the livelihoods of millions of smallholder farmers in many parts of the world. In addition, wastewater has shown its potential for reclaiming potable water, aquifer recharge, sustainable implementation of aquaculture and agroforestry, and the support of various ecosystem services.

It is clear that achieving universal treatment of waste will take many generations and so alternative, more cost effective solutions are needed in parallel. And yet the scale of planned resource recovery from wastewater is currently quite limited, especially in low- and middle-income countries. The public sector and the emerging private sector, which could play important roles in resource recovery, often struggle with operational challenges, inadequate regulatory frameworks, and often the lack of capacity to develop or evaluate business plans pertaining to resource recovery and reuse.

Based on the most up to date information and data, this book showcases wastewater from on-site sanitation as well as sewered systems as an asset that can be valued financially and economically. By changing the paradigm of ‘treatment for disposal’ to ‘treatment for reuse’ a variety of value propositions for water, nutrient and energy recovery can support cost savings, cost recovery, or even profit generation, contingent upon management of possible health and environmental risks.

The book editors and chapter authors have undertaken a challenging and exciting task of providing insights into the economics of wastewater use and ‘business thinking’ in a sector that traditionally relies on public funding. We believe that with continued applied research and technological advances, effective policy messages, private sector involvement, and successful business development, the prospects of achieving national and international sanitation and water reuse targets can be greatly enhanced for the benefit of millions of households. This book offers

a pertinent and credible analysis of the challenges and opportunities in transforming wastewater into an economic asset and turning urbanization from a challenge into an opportunity.

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Wastewater

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