

# Preface

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The scarcity of water will be one of the most critical problems in the world in the next 15 years as a result of population growth and contamination. Also, the effects of climate change will worsen the environmental situation with intensive droughts on one hand, and damaging floods on the other. Rainwater harvesting (RWH) has emerged as a critical strategy to meet these challenges through the experience and knowledge of teams of international experts. Since Agenda XXI (1992), RWH is considered as a significant action to meet water scarcity particularly in islands and in the expansion of the water supply network (United Nations Sustainable Development, 1992).

Furthermore, the United Nations launched the Millennium Development Goals Report in 2015. In this document the water issue is included in goal number six that states, 'By 2030, ensure availability and sustainable management of water and sanitation for all' (United Nations, 2018). In referring to RWH, this goal proposes increasing the efficiency of irrigation (more crop per drop) and harvesting and reusing rainwater at the household level in water-poor regions.

The rainwater harvesting cause needs more promotion throughout the world. In spite of the advances around the globe, in many countries it is not a well known technology. For example, Latin America and some Asian countries would benefit greatly from building on the experience available from countries. This book promotes different skills, knowledge, and approaches from several experts who have worked in various professional fields in several countries. You will find

experts with tremendous experience and expertise alongside emerging experts with enthusiasm and new ideas.

The book has four sections: basic concepts, narratives of RWH, programs implemented by diverse sectors of society, and notable technical cases. The first part explains a short history of RWH and the functioning of its components, with purpose of giving the reader the basics. It allows the reader to obtain a variety of approaches, examples, knowledge that comes from the daily life of each author. Given the importance of rainwater as a tool to tackle the current and future water scarcity problems of the world, this document provides an overview of the state of the art of RWH advances from many contexts across the planet.

The subject of this book is related to the promotion of different international rainwater experiences that provides sustainable water services and climate resilience, including technical aspects and socio-cultural and policy affairs. This book is the result of the efforts of various international experts who have been driving rainwater harvesting systems as a real alternative for supplying water and counteracting climate change effects over the last 30 years. This volume appeals to a wide range of readers who are interested in the rainwater harvesting being a useful tool in engineering, architecture, and urbanism, programs. The reader can gain the inspiration with the aim of getting involved in the international rainwater catchment cause through knowing and contacting many experts with a vast professional experience in different disciplines and approaches.

Several of the contributions are derived from the First National Conference organized by Mexican Rainwater Catchment Systems Association (AMSCALL, initials in Spanish), International Rainwater Catchment Systems Association (IRCSA), University of Guadalajara, and the National Council of Science and Technology from Mexico, celebrated in 2017 in Guadalajara, Jalisco, México.

I would like to thank every contributor who worked with dedication and commitment; your effort is not in vain, you are planting a seed that will grow significantly for the benefit of humanity and the planet.

**Dr. Arturo Gleason**

**Book Editor**

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## REFERENCES

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