

Preface

Civilisations and cultures were often born in the border zone land-water. Therefore, it is not a surprise that in the beginning of the 21st century 80% of the largest population concentrations can be found in coastal and deltaic areas. In all these cases, without any exception, there is only limited space available for living, working, tourism/recreation and for infrastructure, while there is the need to preserve or expand valuable environment, nature and landscape.

At the same time we are confronted with the effects of climate change, manifesting itself in rising temperatures, sea level rise, a higher frequency and intensity of storm surges, as well as a higher frequency and intensity of rainfall with intermittently periods of drought. In addition, we have to take into account land subsidence, a higher percentage of built-up area, deforestation, a quicker run-off towards the rivers, and salt water intrusion. We have water as a valuable friend but periodically also as a serious foe. And last but not least we are confronted with a serious increase of the world population, with all its inherent consequences, such as depletion of fossil resources, high energy consumption and high waste production. It is crystal clear that there is an increasing need for sustainable solutions.

This book “Smart Building in a Changing Climate” is an up-to-date compilation of the latest insights with regard to sustainable solutions for the built environment. Professor Andy van den Dobbelsteen, as editor, with his co-editors Dr Machiel van Dorst and Dr Arjan van Timmeren, succeeded in bringing together scientists and well-known visionaries to present their views. Their articles aim at achieving, in due time, necessary sustainable development for the benefit of mankind.

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