Foreword

On behalf of the sponsors of the international workshop on ‘Transitions Towards Sustainability Through System Innovation’ I am happy to recommend to you the edited volume of the most interesting research results and ideas presented at this workshop.

Global environmental change poses an unprecedented international challenge for 21st century societies since it requires a radical change in the way human needs in the field of energy, food, water and mobility are met. It calls for a transformation of our current consumption and production patterns as well as a transformation of incentive structures and the institutions that shape the relationship between the two. Such a proactive approach is based on the understandings of system analysis, system being defined as a set of inter-related economic activities and actors and flows of goods and services. For system change to be effective, it needs attention in all aspects of life: technology, institutions, economy, and the socio-cultural sphere. Because of this complexity, it is not surprising that a change to a more sustainable system will require a long time – at least one generation.

For that reason, research into societal transformations that have the potential to decouple economic development from environmental burden has become the focus of many research institutes worldwide. Two types of research activities can be distinguished: one is focused on understanding the dynamics of past transitions that, very often, occurred without deliberate planning; the second type of research focuses on the possibilities of steering societal changes towards sustainability.

This book is one of the first to present the state of the art in knowledge of transitions towards sustainability through system innovation. Even though knowledge in this field is still in its infancy, we are starting to recognize the foundation of a new field of research with a new set of definitions and approaches. I very much hope this book will serve as a good starting point for those who want to further expand this field. The book is primarily meant for those who are curious about how transformations take place and what problems societies face when they want to steer these great changes in a desired direction.

Pier Vellinga

Chair of the Scientific Steering Committee of the Industrial Transformation Project of the International Human Dimensions Programme on Global Environmental Change (IHDP IT)