## Foreword

It is a great pleasure to write this foreword for Dr. Rahul Sharma's book on the resource potential and technical, environmental and management issues associated with deep sea mining.

After many years 'on hold' the prospects for deep sea mining have improved significantly in recent years. Better scientific understanding of deep sea mineral resources as well as the development of new technologies for exploitation and processing of deep sea mineralshas led to renewed commercial interest, particularly in the 'Area' beyond national jurisdiction. As a result, the International Seabed Authority has been tasked with the development of a comprehensive code for deep sea mineral exploitation, consistent with the norms established by the United Nations Convention on the Law of the Sea, under which sustainable harvesting of seabed minerals may be conducted for the benefit of mankind as a whole.

It has taken many years to reach this point. Scientists and engineers from various organizations around the world have for decades been conducting research on developing techniques for mineral prospecting and resource estimation as well as designing efficient and cost-effective systems for mining of these resources. Many of these scientists and engineers are or will be reaching retirement age and one of the principal aims of Dr. Sharma's book is to bring together in one place the accumulated wisdom and knowledge of several of the world's leading experts on deep sea mining. Rahul Sharma himself is one of those experts having spent some 30 years teaching and working in the field conducting research on deep sea minerals and the environmental issues associated with their exploitation. It has been my pleasure to have worked with him on a number of projects associated with the International Seabed Authority.

I congratulate him and the experts that have contributed to this important book. Whilst many challenges remain, not least the challenge of maintaining environmental balance whilst harvesting marine minerals, I am confident that these challenges can be overcome in order to provide the world with a safe, sustainable and secure supply of critical minerals well into the future. I am confident that this book will serve as an important source of reference for future generations on this topic.

With best wishes.

Michael Lodge Secretary General International Seabed Authority Kingston, Jamaica