

INTRODUCTION

Science and technology have led the world towards innovative solutions to today's multi-faceted challenges, at the same time, providing the foundation for economic growth and development and safe guarding the degrading ecosystem. Breakthrough advances in the fields of information technology, biotechnology, materials sciences, health sciences, renewable-energy technologies and other scientific areas, in the last few decades, have revolutionized our way of living, and have upset the power structures for those who pursued excellence in science and technology and shifted it towards sustainable development.

The first and foremost need is to realize and assert the importance of science and technology for achieving sustainable human development. Thereafter, this will help in taking corrective measures in addressing critical issues, such as the available skill-sets of personnel, infrastructural capacity, funding options, institutional networking, and regulatory framework to conduct scientific research and carry out technological development.

To meet the challenges of our globalized economic systems, we need to commit ourselves to the development of human-capital and ensure sustained learning-process within the public and private institutions to foster a culture of innovation. It is essential to direct the policies concerned with the development of human-capital, science and technology and innovation towards improving the scientific-base, raising per-capita income, generating employment and alleviating poverty.

In order to fully exploit the benefits of science and technology, proven to be the engines for sustainable development, third-world countries need to devise policies that would promote science and technology, as well as mobilize S&T resources from across the globe and link them with their respective national systems. For this purpose the institutionalization of S&T under a sound policy is required for proper planning and for laying the foundation of S&T system of a country, as well as for effective execution of S&T activities. There is a strong need to develop coherent and relevant S&T policies across the developing world, through formal institutions that can provide the base necessary for formulating such plans and policies that are capable of influencing the very terms in which policies are conceptualized and implemented.

The debate about sustainable socio-economic development has given additional complexity in the understanding of policies and strategies. Most of the developed and some developing countries are well aware of the complex mosaic on which they have to formulate their clear vision regarding suitable policies and strategies to be adopted on sustainable socio-economic development. However, in the continuously changing

international socio-political environment, and due to internal problems, many developing countries find it extremely difficult to formulate firm policies and plans workable for longer periods of time.

The various sections of this book have been compiled, keeping in view the above-stated realities. This compilation is a humble effort on the part of COMSATS to highlight and address issues relating to long-term S&T policy-making and implementation in the developing countries. It is necessary for me to formally acknowledge the efforts of all the authors and co-authors of this book. Also, I would like to particularly express my gratitude to the team at COMSATS, who has made all out efforts in editing, composing and designing this book, especially Dr. M.M.Qurashi, Mr. Irfan Hayee, Ms. Sadia Nawaz and Mr. Imran Chaudhry.

I sincerely hope that this book fulfills the objectives with which it was conceived, that is, of disseminating information on issues related to S&T policy in the developing world, particularly in various policy-making and development circles. I am hopeful that this book will prove to be worth every reader's time and attention as well as encourage COMSATS to bring out even better and useful publications in the future.

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