



World Association for Sustainable Development



5th International Conference

# Managing Knowledge, Technology and Development in the Era of Information Revolution

Edited by Allam Ahmed



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Managing Knowledge, Technology and Development  
in the Era of Information Revolution

Allam  
Ahmed  
2007



# **Managing Knowledge, Technology and Development in the Era of Information Revolution**

**Edited by Allam Ahmed**

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Proceedings

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## **Preface**

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We are pleased to present the proceedings of the 2007 International Conference, jointly organised by the World Association for Sustainable Development (WASD) and Griffith University, held in October 2007 in Brisbane, Australia.

The conference focused on 'Managing knowledge, technology and development in the era of information revolution' and attracted more than 70 academicians, researchers, practitioners and policy-makers from all over the world representing more than 25 countries.

Similar to previous conferences organised by WASD, the response to our call-for-papers has been so high with more than 100 abstracts and papers received covering a wide range of focus and scope of the theme to the extent that we had a difficulty in deciding the papers to be included in this volume.

We have finally selected 58 papers with an interesting profile for this volume covering a wide geographical spectrum after the review process (not refereed).

The 13 main parts of the book are:

- PART- I: Education (4 papers)
- PART- II: Knowledge Management and Development (7 papers)
- PART- III: Information and Communications Technologies (7 papers)
- PART- IV: Science Technology and Innovation (5 papers)
- PART- V: Food Security (4 papers)
- PART- VI: Gender and Development (4 papers)
- PART- VII: Transportation Studies (4 papers)
- PART- VIII: Climate Change and the Environment (2 papers)
- PART- IX: Macro-economic Analysis (4 papers)
- PART- X: Globalisation and International Business (4 papers)
- PART- X1: Marketing, Trade and Investment (4 papers)
- PART- XII: Accounting and Finance (6 papers)
- PART- XIII: Quality Management, Training and Development (3 papers)

Many scholars argue that information can lead to knowledge and knowledge is a prerequisite for development. Education and knowledge are the chief currencies and the essence of modern age and can also be a strategic resource and a lifeline for Sustainable

Development (SD). Yet, according to the latest reports and statistics by the United Nations (UN), millions of people in Africa have never made a telephone call, and without the ability to communicate, Africa will remain poor and isolated, lacking the means to participate in the global society.

To operate efficiently, it is imperative to possess knowledge on a broad spectrum of issues and concepts that affect business activities around the globe. Successful management in the new millennium requires developing new methods and approaches to suit the challenges and opportunities of this new era of information revolution. A recent example of how knowledge sharing can accelerate development in science and benefit people has been experienced in the case of Severe Acute Respiratory Syndrome (SARS) epidemic during which the Human Genome Project data was made available to scientists to turn a collection of individual sequences into an incomparably richer resource.

Rapid technological development is moving the world from an Industrial Age to an Information Age. Advances in the technological innovations in Information and Communication Technologies (ICTs) have contributed to the shaping of the world we live in and we are truly now in the era of the Information Revolution. Today, countries are increasingly judged by whether they are *information-rich* or *information-poor* with an estimated 30–40% of the world's economic growth and 40–50% of all new jobs will be IT driven.

The gulf in the levels of science and technology between the developed and the Developing Countries (DCs) will tend to widen further with the rapid expansion of the internet in the west and the speedy transition to digitalisation, and this can lead to increased brain drain and dependence on foreign aid of a different kind. Most of these technological innovations in ICTs have originally started in the developed countries and frequently designed in ignorance of DCs' realities, particularly Africa, and therefore fail to address the needs of the most disadvantaged sections of the community.

In many cases, the interest of the industrialised countries in the use of ICTs in the DCs has been more concerned with the profitability of their own business enterprises than with any broader goals concerning the development of the recipient countries. Therefore, DCs are posed with the challenge of either becoming an integral part of the knowledge-based global culture or face the very real danger of finding themselves on the wrong side of the *digital divide*. For DCs, keeping up with these changes and involvement in research are both vital. DCs recognise that much of their economic future will depend upon the understanding of the global technological forces at work and their long-term implications. ICTs must be designed and manufactured according to economically sustainable principles; hence, governments are making efforts in relation to digital strategy as means of embracing technological changes and remaining competitive within a SD context. Early 2005, the UN announced the launch of the 'Digital Solidarity Fund' to finance projects that address the uneven distribution and use of ICTs to enable poor people enter the new era of the information society.

Adopting a more holistic approach, the conference aims to provide a stimulus for knowledge exchange and discussion that focuses on the issues addressed above to critically examine the inter-relationship between these different issues in order to reach solutions and consensus for a better future. The conference will also provide a framework for understanding and acting upon these solutions and consensuses, taking into account a variety of international, institutional and intellectual perspectives.

It is also a time now to learn lessons from the successful communities and emulate the ideas and innovations of these communities by the backward and not so successful nations and regions. Like in the past, the conference will focus on the case studies or country studies in technological innovation and experience and how to manage them effectively.

Finally, we would like to congratulate the authors for their valuable contribution and we are grateful to our track chairs and many reviewers for graciously offering their invaluable comments that have enriched the quality of the papers in this volume and also for making available to us their valuable time and efforts. Our most sincere thanks go to all of the keynote speakers and presenters who shared with us their expertise and knowledge.

On behalf of WASD, we would like to thank Griffith University and most sincerely the conference co-chair (Dr. Moazzem Hossain) and his highly professional and dedicated staff for their generosity and full support to the 2007 Conference.

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