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## EDITORIAL

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WELCOME to the inaugural issue of *International Journal of Sudan Research* (IJSR). IJSR is the first international, multidisciplinary, refereed journal about Sudan aims to benefit academics, professionals, researchers, policymakers, businesses, ordinary people, students, etc from both Sudan and the rest of the world with the best available scientific evidence, to enable better understanding of the different challenges facing Sudan. It therefore helps in providing access to information about Sudan. However, it is important to note that understanding the nature of problems, challenges and opportunities in Sudan is a very difficult task for many people outside its territories. Equally important to mention the fact that the current situation in the Southern and Western regions of Sudan is very likely to impact the contributions of different scholars from both regions.

### OVERVIEW

Unlike many other developing countries, there has been a growing interest in Sudan and its culture over the past few years. Sudan is strategically very important as it is the largest country in Africa and 9<sup>th</sup> largest in the world and has also boasted the 'largest farm in the world' in the Gezira Irrigated Cotton Scheme. Sudan's vast plains were seen by development experts as a potential

'bread-basket' – either for Africa or for the Arab World across the Red Sea.

### Human Development Index (HDI)

Given the apparently contradictory needs of economic growth and environmental conservation, it comes as no surprise that sustainable development (SD)<sup>1</sup> has had such a powerful influence in contemporary discussions on the future of Sudan. Sudan, like much of the rest of the developing world, has toyed with and abided by various approaches or strategies to achieve SD without reaping any significant socio-economic benefits. According to a recent IMF report (2007), despite the economic significance of Sudan's oil, Sudan score lower on HDI<sup>2</sup> world ranking. It is, therefore, generally recognised that the dominant economic model of Sudan – based on the public sector, agriculture, oil incomes and workers' remittances – is not up to the challenges of globalisation. The majority of Sudanese (80%) depend on agriculture; oil is considered one of the main Sudanese exports, particularly during the last fifteen years, providing revenues of millions of US dollars a day. However, the recent Darfur conflict, the aftermath of two decades of civil war in the south and the lack of basic infrastructure in large areas have kept much of the population at or below the poverty line for years despite rapid rises in average per capita income. What

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happens in Sudan will therefore have direct and indirect effects all over the region and that is why Sudan is rarely out of the headlines in all international news over the last 10 years.

### **Brain Drain**

A major feature of the Sudanese economy is the large number of its highly qualified labour force working abroad. In recent years, growth in urban labour force has been much faster than that of the rural labour force. Because of social, political, cultural reasons and economic downswing in many African countries, Sudan suffers a significant 'brain drain', particularly of its professionally qualified university graduates including doctors and dentists, university lecturers, engineers and surveyors over the last 20 years (see Ahmed, 2006; Ahmed and Newton, 2005). Often, good researchers and research managers with superior performance seek employment elsewhere to get their rewards. Brain drain is a major problem for most Sudanese institutions academic and research, and most institutions have some areas of expertise where they cannot compete for the best brains (Ahmed, 2006). Since the demand for subject matter specialists, scientists, specialised teaching staff, economists, and increasingly also for biophysical scientists is rising fast in the private sector, many institutions will likely have even more difficulty in recruiting and retaining skilled employees. It doesn't help that donor interest in supporting long-term training has declined, resulting in the pool of young well-trained scientists actually shrinking in Sudan.

### **National Academic and Research Institutions (NARIs)**

There are clearly opportunities for academic and research institutions in Sudan

to contribute more effectively towards achieving the Millennium Development Goals (MDGs)<sup>3</sup> and SD. However staffing instability plagues most of universities and research institutions, and the turnover rate in most of them reaches 10% (see Ahmed and Newton, 2005). Reasons include: poor management, unattractive conditions of service, lack of job satisfaction, lack of funding, etc (for more discussion on these issues see Ahmed, et al, 2008). Both donor-driven projects and civil service procedures used by the Sudanese government have failed dismally in rewarding individuals who perform and in targeting funds at entities that use them well. The good news is that both donors and the government are now showing great interest in learning from their errors. Sudanese universities and research institutions are also under increasing governmental pressure to make direct, visible, and relevant contributions to MDGs and SD strategies. At all levels and on all scales of endeavour, the role of universities and research institutions is crucial to resolve the economic, social and environmental problems that make current development paths unsustainable. Sudanese universities and research institutions can make a leading contribution to tackling major problems such as: fighting disease; overpopulation and urbanization; the digital/information divide and the impacts of information technology systems on world financial markets; coping with climate change; confronting the water crisis; defending the soil; preserving forests, fisheries and biodiversity; trade in biotechnological products; and building a new ethic of global stewardship.

### **Digital Opportunity Index (ODI)**

The recent DOI<sup>4</sup> reports by WISR (2006-2007) reveals an alarming picture for Sudan despite the telecommunication revolution

in the last ten years with Sudan placed at the bottom of the Middle East and North Africa region (MENA). Bartholomew (1997) argues that technology development is embedded in a country's history, cultural values and attitudes. Therefore, attitude to IT could also have something to do with national culture and in the case of Sudan issues to do with Freedom of Information could be one of the reasons behind Sudan's lack of success as access to the Internet brings with it free access to information and therefore if the political climate of the country does not permit such access, then rapid progress towards information society cannot succeed in that country (see Ahmed, 2007; Ahmed and Nwagwu, 2006).

### **Environmental Performance Index (EPI)**

The latest EPI<sup>5</sup> released during the 2006 World Economic Forum reveals that Sudan has a lower EPI ranking as the country is relatively unpolluted due to its underdevelopment, but still Sudan is not meeting the challenge of providing environmental infrastructure (drinking water and waste water treatment) for its people and creating systems for pollution control and ecosystem protection. However despite considerable public investment in potable water supply services (World Water Forum, 2006), deteriorating environmental conditions will lead to a serious water shortage problem. The sustainability of the human and economic development of the country will thus depend on long-distance water transfers projects.

### **Ease of Doing Business (EDB)**

The recent in-depth study by the World Bank entitled *Doing Business 2007: How to Reform* ranks countries on their ease of do-

ing business (EDB)<sup>6</sup> with first place being the best. However despite the large inflows of foreign direct investment into the country, Sudan scores very low in EDB!

### **THEME**

Today, countries are increasingly judged by whether they are information-rich or information-poor. There is a growing literature in the Sudan and about Sudan but it is fragmented and often restricted to sector applications or to specific interests. It is therefore difficult for decision-makers in Sudan to access systematic information about the potential applications that are being developed and implemented and to consider how they could be applied to meet Sudan's own development needs. The general theme of IJSR is to discuss integrated approaches and strategies to achieve SD in Sudan. IJSR is intended as a forum for practitioners, academics, and policymakers from around the world to exchange concepts, research, and best practices about Sudan. This unique initiative aims to integrate the study of these various disciplines to achieve SD in the Sudan.

### **OBJECTIVE**

IJSR aims to promote the exchange of knowledge, ideas and information about the very best research undertaken about Sudan and therefore, will have a significant role to play in bridging the knowledge divide between Sudan and the rest of the world and help in the rapid generation and diffusion of knowledge and about Sudan. Finally, IJSR aims to consider new perspectives in the field of science, technology and innovation policy in Sudan.

## CONTENT

IJSR publishes original papers, review papers, conceptual papers, technical reports, case studies, conference reports, management reports, book reviews, notes, commentaries, and news. IJSR particularly encourages papers that significantly bring new knowledge to the area both for academics and practitioners. Special Issues devoted to important topics about Sudan will occasionally be published.

## SUBJECT COVERAGE

There is no limitation on the papers/topics that will be considered by IJSR. Articles can address these topics theoretically or empirically through either a descriptive or critical approach. IJSR particularly encourages articles that significantly bring new knowledge to the area both for academics and practitioners.

The following issues are for guidance only and are not restrictive:

- Agricultural sciences, research and technology
- Agribusiness, agrimarketing and agrieconomics
- Animal production, research and technology
- Accounting, finance and banking
- Best practice in the promotion of technologies
- Business ethics, values and social responsibility and management
- Corporate governance and strategy
- Development of research methods, validation of measures and calibration
- Education
- Environmental issues and environmental challenges for business and management
- Engineering, industry and manufacturing
- Evaluation of effectiveness of public health programmes or interventions
- Food hygiene, quality assurance and control
- Food irradiation and genetic modified food
- Food and nutrition policies; legislation, regulation and enforcement
- Food security policies
- Future trends in intermodal transportation
- Globalisation
- Government involvement in transportation development
- HACCP, hazard detection and analysis and good manufacturing practices
- Health protection; control of communicable and non-communicable diseases
- Health service effectiveness, management and re-design
- Human nutrition and health sciences
- Human resource management
- Innovation and diffusion
- Information and communication technologies, information systems/technology and e-commerce
- Informal sector
- Industrial engineering and management
- Infrastructure development, maintenance, and upgrade

- Intelligent transportation systems
- Investment and trade
- Impacts and challenges of AIDS, malaria and other chronic problems
- Knowledge management and transfer
- Medical and biomedical sciences and research
- Millennium development goals (MDGs)
- Marketing and enterprise
- Nutrition and public health
- Operations and production management
- Project management
- Public health nutrition: practice and impact
- Public health, health promotion and diseases prevention
- Public health policy and comparisons
- Public policy and administration
- Pharmaceutical sciences and technologies
- Pipeline operations
- Privatisation
- Research and development
- Railroad development and involvement in intermodal transportation
- Sustainable development strategies
- Sustainable food production systems
- Supply chain management and logistics
- Strategic management and planning
- Science, technology and innovation
- Small and medium sized enterprises (SMEs)
- Security of the transportation system
- Transportation planning
- Technology transfer and commercialisation
- Travel, transportation and tourism
- UN Millennium Development Goals (MDGs)
- Water, energy and climate change
- Veterinary sciences and research

### **EDITORIAL BOARD**

IJSR editorial committee is truly international in terms of the wide range of specialisation of its members and the validated academic background that they bring to bear on the quality of the review and the geographic areas (within and outside Sudan) from where they have come with different editorial experience.

### **INAUGURAL ISSUE**

The response to our inaugural issue has been so high with many high quality papers received covering a wide range of focus and scope of IJSR. We have selected six papers with an interesting profile for the inaugural issue covering a wide spectrum of topics and focus. It is hoped that the ensemble of papers presented in this first issue will help to stimulate debate amongst scholars, researchers and policymakers that will ultimately lead to a more integrated and multidisciplinary approach to SD. However as we work towards achieving SD and growth, we must strive not to lose sight of the big picture and that we must think *and* act both globally and locally.

Finally we hope you find our inaugural edition to be interesting and thought provoking and look forward to receiving your valuable submission and comments so we can continue to serve your needs to the very best of our ability.

## ACKNOWLEDGEMENTS

We are very grateful to all the members of our editorial board for their continuous support, valuable time and efforts. Our most sincere thanks go to all of the authors who shared their expertise and knowledge with the readers of IJSR. Finally we thank our manuscript reviewers who kindly provided invaluable comments that have enriched the quality of the papers in this issue.

## BIOGRAPHY

**Prof. Allam Ahmed** holds a Ph.D. in Technology and Knowledge Transfer from Edinburgh Napier University, UK with backgrounds in Economics & Science from the University of Khartoum, Sudan, Economics, Management & Strategy from the Royal Agricultural College, UK, Fellow and Chartered Marketer of the Chartered Institute of Marketing, UK. Following several senior lecturing appointments at Edinburgh Napier University, University of East London and then the Science and Technology Policy Research - SPRU (*world leader in research, consultancy and teaching in the field of Science and Technology Policy*) University of Sussex, where he established the postgraduate programme in international management, Allam was appointed Manager of the new Knowledge and Education Management Framework in the Emirates by the Government of Abu Dhabi (*largest and first of its kind in the Middle East*). Allam has worked extensively for the World Bank, UN, European Union, and for various governments, in the Middle East in particular and Sudan. He is the Founding President of World Association for Sustainable Development (WASD); Founder of Sudan Knowledge; International Coordinator of the UNESCO Chair for Technology Transfer; Founding

Editor-in-Chief of World Review of Science, Technology and Sustainable Development (WRSTSD); World Review of Entrepreneurship, Management and Sustainable Development (WREMSD) and International Journal of Food Safety, Nutrition and Public Health (IJFSNPH) and serves on the Editorial Board of eight international journals in STI, KM, Business, Entrepreneurship, Marketing, Management, Strategy & International Business. Recipient of several international Awards and Medals for contribution to International scientific Research including the Royal Agricultural College (UK) Scholarship and Prestigious Book Prize for Best MSc/MBA Dissertation. Listed in the WHO'S WHO IN THE WORLD 2009, 2010 and WHO'S WHO IN FINANCE and BUSINESS 2009/2010 published by Marquis Who's Who, New Providence, NJ 07974, USA.

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## NOTES

1 The Brundtland report (WCED, 1987, p.43) defined SD as "development that meets the needs of the present without comprising the ability of future generations to meet their own needs."

2 HDI is a composite statistic used to rank countries by level of "human development" and separate developed, developing, and underdeveloped countries. The statistic is composed from data on life expectancy, education and per-capita GDP collected at the national level using certain agreed formula.

3 MDG is a framework of 8 goals, 18 targets, and 48 indicators to measure world progress towards the implementation of these goals. The eight goals include: *Eradicate extreme poverty and hunger; achieve universal primary education; promote gender equality and empower women; reduce child mortality; improve maternal health; combat HIV/AIDS, Malaria, and other diseases; ensure environmental sustainability; and develop a global partnership for development.*

4 DOI is the only e-index based solely on internationally agreed ICT indicators, developed for 181 countries in 2006. This makes it a valuable tool for benchmarking the most important indicators for measuring the Information Society. The DOI is a standard tool that governments, operators, development agencies, researchers and others can use to measure the digital divide and compare ICT performance within and across countries.

5 EPI focus on current on-the-ground outcomes across a core set of environmental issues tracked through 16 indicators in six policy categories for which all governments are being held accountable. These categories include: *Environmental Health, Air Quality, Water Resources, Biodiversity and Habitat, Productive Natural Resources, and Sustainable Energy*. As a quantitative gauge of pollution control and natural resource management results, the Index provides a powerful tool for improving policymaking and shifting environmental decision-making onto firmer analytic foundations.

6 EDB averages the country's percentile rankings on 10 topics, made up of a variety of indicators, giving equal weight to each topic. These indicators include: starting a business (STA); dealing with licenses (LIC); employing workers (EMP); registering property (REG); getting credit (CRE); protecting investors (PRO); paying taxes (TAX); trading across borders (TAB); enforcing contracts (CON); and closing a business (CLO).