1. INTRODUCTION

> *'Everyone has the right freely…to share in scientific advancement and its benefits' – The Universal Declaration of Human Rights (1948)*[1]

The Universal Declaration of Human Rights, and the spirit behind it, obliges all of us, whether in the public or the private sector or in civil society, to ensure that there is equitable distribution of benefits from development. It is the moral and ethical obligation of all societies to provide every child, woman, and man an opportunity for a productive and healthy life.

For this transformation to happen, a new social contract where domestic policy will still matter (ethics of sovereignty), which will encourage local level innovations, access to appropriate technologies and the development of skills, will have to prevail. Global and national level policies will have to accelerate the creation of institutional, social and economic enabling environments at the national and regional levels, which will enhance their capacities as partners in development and stewards for equitable growth.

There is an urgent need to develop a truly all-encompassing international code of ethical conduct wherein a range of issues, including the regulation of knowledge monopolies, will be addressed, and ethical commitments will be periodically reviewed and their appropriateness determined in the light of new knowledge and changes in circumstances. Public good partnerships will have to be promoted among governmental, non-governmental organizations and civil society-based organizations through cooperative activities directed toward major groups, such as youth, women, and indigenous populations, to overcome the growing divides in contemporary developmental pathways. For example, it will be necessary to address the rich-poor divide, gender inequity, unemployment, and environmental damage especially in the developing and least developing countries. Particular emphasis will have to be placed on the development of technology specific to this region, technology transfer, training, the development of techno-infrastructures and trade.

Quite a few conventions and declarations support this pathway and emphasize that the ethical issues should be taken seriously, like the 2001 Brussels Programme of Action for the Least Developed Countries[2] and the 2001 Doha Declaration on a new developmental round.[3]

One of the major lessons learnt since the 1992 UNCED[4] is that the transition towards sustainable development is inconceivable without science, engineering and technology. Building and maintaining adequate scientific and technological capacities in all countries and harnessing these capacities to address critical economic, social and environmental issues are essential prerequisites for the transition to sustainable equitable development. There is also a growing concern

about the need to strengthen the ethics and responsibility of science and the scientific community. The transition to sustainable equitable development requires integrity and objectivity in the practice of science and technology, founded on the principles of ethics.

This is why promoting the goals of sustainability, addressing immediate human and social needs and confronting the various challenges in the current developmental paradigm, while preserving the earth's fragile life support systems, has emerged as an increasing priority for the international S&T community. Recognizing the growing awareness of the role of S&T in development, UNESCO negotiated a 'social contract' for science for the 21st century in June 1999 in Budapest.[5] This initiative heralded a paradigm shift in prioritizing strategic investments in S&T worldwide. Thus, while Agenda 21 underscored the need for political commitment in the application of S&T, the agenda for science outlined specific commitments and recommendations for using S&T for sustainable development and for bridging the increasing divides in technological development and its application. A new contract is needed between science and society in which ethical dimensions play a central and guiding role to bridge the growing technological/digital/gender and genetic divides, among others. Much of the concern over the widening technological gap has focused on what is popularly known as the 'digital divide,' which is clearly brought out in the HDR 2001.[6] The era of intellectual property rights (IPR) regime has also focused increasing attention on the genetic divide.

The past two decades have witnessed growing efforts to assert and enforce intellectual property rights (IPR) over scientific and technological knowledge through the use of patents, copyrights and other more novel forms of legal protection. There is not much empirical evidence as to how altering the legal conditions and terms of IPR translates into change in the overall strengths of economic incentives for the producers, or about the effectiveness of bigger incentives in eliciting creative results. Nor, is it a straightforward matter to determine the way in which holders of a particular form of intellectual property right would choose to exploit it, and the consequent magnitude of the resultant social losses in economic welfare. A valid example for this argument is the recent public outrage at the exorbitant prices being levied in the developing world by patent-holding multinational drug companies for medicines for the treatment of HIV/AIDS.[7,8]

The recent assessment of the PFA[9] continues to reveal a gender divide, which also raises critical ethical issues. But beyond all the rhetoric, there persists the more fundamental issue of how to mobilize the world's scientific and technological knowledge to contribute to the welfare of the developing world and see that such benefits are distributed more equitably in the ever increasing knowledge-based economy. Much of the debate is based on ethical dimensions related to the Universal Human Rights Declaration, 1948. In the prevailing scenario, one must

not be deluded into supposing that appeals to principles of equity alone will be sufficient to decide such contests in the area of political economy.

These issues have a tremendous bearing on the Asia-Pacific region where a community of very divergent countries in terms of their culture and natural resources is located. The most populated countries of the world are found here, and small islands too. Prosperous countries co-exist with least developed ones, those that lack proper infrastructure in science and science education, but are rich in local and traditional knowledge (HDR, 2002[10]). In the long run, the growth prospects for the Asia-Pacific region, driven by the new opportunities offered by technological advances and globalization, are very positive, provided both sound macroeconomic policies are implemented and the necessary reforms in the financial and social sectors continue with tremendous mobilization through micro-planning at the local levels.

The chapters that follow deal with the various facets of the Ethics of Economic Development from the perspectives of Economics, Employment, Ecology, Energy, Inequity and Intellectual Property Rights. Chapter VIII, on Bridging the Divides, looks at means and ways of using technology to bridge the gap in development efforts and the ethical considerations that have to be kept in mind when doing so. Chapter IX sums up the approach needed and cites an example in the Indian context.

Endnotes and References:

[1] Universal Declaration of Human Rights 1948 …the peoples shall have the right to decide their own priorities for development as it affects their lives, beliefs, institutions and spiritual well-being and the lands they occupy or otherwise use, and to exercise control over their own economic, social and cultural development.

[2] 2001 Brussels Programme of Action for the Least Developed Countries, www.uncdf.org/english/about_uncdf/least_developed_countries.html

[3] 2001 Doha Declaration, www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.htm

[4] United Nations. 1992. Agenda 21: *Report of the United Nations Conference on Environment and Development,* United Nations Division for Sustainable Development, New York.

[5] UNESCO. 2000. Science for the Twenty-First Century: A New Commitment, Banson, London.

[6] UNDP. 2001. Human Development Report 2001, Oxford University Press.

[7] allafrica.com/stories/200103060130.html – 39 transnational pharmaceutical companies bowed to worldwide condemnation and pressure, and completely abandoned their court action against the South African government over legislation that could be used to make essential drugs affordable for millions of South Africans.

[8] Cecilia Oh, *et al*. TRIPS, Patents and Access to Medicines: Proposals for Clarification and Reform, www.twinside.org.sg

[9] UNIFEM. Progress of the World's Women 2000 Report, www.unifem.undp.org/progressww/2000

[10] UNDP. 2002. Human Development Report 2002, Oxford University Press.