B.C. Nirmal
Rajnish Kumar Singh *Editors*

Contemporary Issues in International Law

Environment, International Trade, Information Technology and Legal Education

SATYAM LAW INTERNATIONAL

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Foreword

Rapid growth of new technology, innovative techniques of exploitation of resources and novel patterns of trading present a challenge to international law. International agencies and institutions are shaping the domestic policies. Developments at Bali conference relating to subsidies and trade facilitation show that even aspects like minimum support price to farmers of a country are to be decided by global forces. In an age when WTO is becoming, perhaps, more important than United Nations, one needs to give a fresh look to the contemporary face of international law.

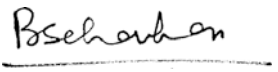
In this context, the present volume on 'Contemporary issues in International Law' (Environment, International Trade, International Technology and Legal Education) comes as a wave of fresh air. Today, we stand at the crossroads of new international and national legal and policy developments. The negotiations at the WTO and the concern for conservation of environment and safe cyber transactions highlight the growing importance of national and international norm-setting in these areas. These international developments are bound to influence the domestic law and policy.

The editors have selected those issues of international law which have emerged as a result of the advent of modern information technology. The connection between the topics of environment, trade, information technology is apparent from the fact that ultimately it is the method of doing business which is causing dents in the traditional understanding of principles and liabilities in international law. The present volume is scholarly and readable. It contains quite well-researched contributions and answers technical questions pertaining to the topics covered. It presents an intelligent sense of conceptual and contextual aspects of environment, trade, information technology and legal education that is in tune with certain ideas and experiences of readers and lawmakers. At the same time, the book keeps a reader engaged by providing details of the subject in lucid and easy to understand manner. It is certainly a good reading for researchers and policy makers alike.

The editors have selected and arranged chapters under various sub-themes covering almost all the recent issues in the subjects. The concerns of the developing nations are sufficiently reflected in the volume. The special focus on Indian position on various topics adds immense value to the book.

The national and international norm-setting must take into account the sensitivity of developed as well as developing nations. It presents views from India, Nepal, Bangladesh, Malaysia, Nigeria and England. I wish and hope that it becomes one of the well-cited book on the subjects of international environment, trade, information technology and legal education. I commend the book to academics and policy makers.

I wish the editors and the Law School, Banaras Hindu University all success in all the future academic endeavours.



New Delhi, India
January 2014

Dr. B.S. Chauhan
Judge, Supreme Court of India*

*Justice B.S. Chauhan was a judge of the Supreme Court of India from May 2009 to July 2014. He has since then retired.

Preface

One direct consequence of contemporary changes in international law is the diminishing power of the state and its capacity to deal with the economic matters challenging the existing notions of territory, sovereignty and nation. The state seems to be no longer the centre point of discussions in international law and the decision-making process at the global level is no longer a monopoly of the states as was the case in the twentieth century because the state is now operating within an increasingly diverse matrix of transnational interactions involving other states, inter-governmental institutions, corporations and whole range of cross-border groups and networks.

In an attempt to explore the changing nature of international law and its ability to respond to the rapid changes brought about by the contemporary issues related to international environment, trade and information technology the present volume, '**Contemporary Issues in International Law**' (Environment, International Trade, Information Technology, and Legal Education) brings together the ideas deliberated by a cross section of scholars from Asia, Africa and Europe during the first ever 2-day International Conference on 'International Environmental Law, Trade Law, Information Technology Law, and Legal Education' organized by the Faculty of Law, Banaras Hindu University on March 2–3, 2013. Hon'ble Mrs. Justice Ranjana Prakash Desai, Judge Supreme Court of India and Hon'ble Mr. Justice S.P. Mehrotra, Judge Allahabad High Court delivered the inaugural and valedictory lectures respectively. Hon'ble Mr. Justice R.S.R. Maurya, Judge Allahabad High Court also delivered a special lecture in the inaugural session. The conference was attended by more than 400 participants including delegates from England, Nigeria, South Africa, Malaysia, Bangladesh, Nepal and India. The present volume contains select papers from all the sessions and is divided in 44 chapters apart from an Introduction by the editors.

We express our sincere gratitude to Hon'ble Dr. Justice B.S. Chauhan, retired Judge Supreme Court of India, who being an illustrious alumni of Law School, BHU has always remained a constant source of inspiration to us. Our special thanks are due to His Lordship for his readiness in writing a Foreword for the book.

It is our proud privilege to express our gratitude to Hon'ble Mrs. Justice Ranjana P. Desai for inaugurating the conference and to Hon'ble Justice S.P. Mehrotra and Hon'ble Justice R.S.R. Maurya for their graceful presence during the conference. We wish to express our sincere thanks to Dr. Lalji Singh, the then Vice-Chancellor of Banaras Hindu University, for being kind enough to extend all help and support for making the conference a grand success. We are thankful to Prof. D.N. Jauhar, Former Vice-Chancellor, Agra University and Prof. A. Lakshminath, Vice-Chancellor, Chanakya National Law University, Patna, for gracing the occassion by their presence. We acknowledge the contributions of all the participants. The faculty is indebted to them for their valuable papers.

We thank all the faculty members of the Law School, Banaras Hindu University for their cooperation and encouragement. Our special thanks are due to Prof. M. P. Singh, Prof. D.P. Verma and Prof. B.N. Pandey for their wise advices, support and blessings. We are equally thankful to the staff of Law School for their generous assistance.

The editorial assistance provided by Mr. Digvijay Singh, Research Scholar, Law School, BHU is highly appreciated.

We also owe special thanks to M/s Satyam Books, New Delhi for bringing out the Indian edition of this volume in its present form.

We are mindful of our own limitations as well as of this work. The fields of law explored in the present work are so broad that it is impossible within the limits of one volume book to deal with the each and every aspects of the subject in detail; however, care has been taken to select papers on diverse issues. We will consider our labour fruitful if this book engenders some interest on the contemporary issues of international law and serves the purpose for which it has been designed. The views expressed in the various chapters comprising this work are necessarily those of the respective authors, neither the editors, whether individually or collectively, nor the Law School, Banaras Hindu University is responsible for them. Finally, we dedicate the work to the cherished memory of our founder Pt. Madan Mohan Malaviya Ji. The first Indian edition of the book published in 2014 was designed to commemorate his 150th Birth Anniversary.

Varanasi, Uttar Pradesh, India — B.C. Nirmal
February 2014 — Rajnish Kumar Singh

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Editors and Contributors

About the Editors

B.C. Nirmal is Professor of Law and Vice-Chancellor, National University of Study and Research in Law, Ranchi, India. He was Head and Dean of the Law School, Banaras Hindu University (2012–2014), Varanasi, India. He is Vice-President of the Indian Society of International Law, Vice-President of All India Law Teachers' Congress, a member of the Indian Law Institute Governing Body, and a member of the Commonwealth Legal Education Association (Asia-India) Executive Council. He is also a member of the Academic Council of Banaras Hindu University, Varanasi and Deen Dayal Upadhyaya Gorakhpur University, Gorakhpur, India, as well as the Board of Studies (Law) at Allahabad University and Delhi University and the School Board of Social Sciences, North Eastern Hill University, Shillong, India. He is Honorary Professor, Gujarat National Law University (GNLU), Gandhinagar, India, and was a Visiting Fellow North-Bengal University, Darjeeling, India. He visited The Hague in 1985, Taipei in 2006 and Xiamin Academy of International Law, China, in 2010 in relation to academic programmes. He has delivered lectures at Indian and foreign universities and chaired a number of national and international conferences. He has also served as Editor-in-Chief of *Banaras Law Journal* (2000–2009). He is on the Editorial Board of the *Indian Journal of International Law*. He has written five books and more than 120 research articles, published in various international and national journals. He has presented papers at more than 200 national and international seminars and conferences. He specializes in the areas of international law, human rights, labour law and consumer protection law.

Rajnish Kumar Singh Assistant Professor of Law at the Law School, Banaras Hindu University, Varanasi, India, obtained his LL.B., LL.M. and Ph.D. degrees from the University of Delhi, India. His research papers have been published in various international and national journals. He is the assistant editor of the *Banaras Law Journal* and guest editor of *NUSRL Journal of Law and Policy*. His main areas of specialization are intellectual property laws and arbitration law.

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Chapter 1
Introduction

B.C. Nirmal and Rajnish Kumar Singh

International trading activities are increasing at a great pace. National governments nowadays often find it difficult to evolve policies to regulate the implications arising out of new world economic order. International environmental law, Legal Education and Information technology law are the areas which experience the change the most. These areas may seem to be distinct but are in fact closely interrelated. The tremendous growth of information technology has provided immense opportunities for international trade and commerce and expanding trading activities are leading to global environmental crises. It is important to note that these areas need to be regulated by proper legal framework at the international level. One thing which all the above issues share in common is the transnational character of the problems which are associated with them. This book makes an endeavor to put together the studies on the contemporary issues associated with the topics of international environmental law, international trade law, information technology law, and legal education at the global level. The book contains four parts with each part sub-divided into chapters.

Apart from the contributions by the academic scholars the book contains scholarly papers by Justice Ranjan Prakash Desai on "Legal Education", Justice S. P. Mehrotra on "International Environmental Law, Trade Law, Information Technology Law and Legal Education" and Justice R.S.R. Maurya on "Environmental Pollution and its Control."

Justice Desai notes that Legal education has now assumed great importance. Its importance can be measured by the number of bright students who now choose law above other disciplines. Law has a dynamic role to play as an instrument of

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progress. Legal education teaches how to use law for the betterment of society. The survival of democracy and rule of law is possible only if the legal education inspires lawyers to use law as a tool for their preservation.

She emphasizes that advocates must have knowledge of economics, political science, sociology, and psychology. There is an increasing interaction between technology and law. Some amount of knowledge of relevant technology is essential for a modern lawyer. Justice Desai recommends that legal education must now contain a separate subject entitled "Laws Relating to Women and their Effective Implementation." She also argues for giving importance to compromises over litigation. She concludes that Legal education widens ones horizon, it sharpens our intellect, it makes our mind analytical, and it sensitizes us towards the problems of others.

Justice S.P. Mehrotra presents his views on all the four areas covered by the book. At the outset he notes that adoption of concepts of globalization and liberalization and rapid developments in various fields of science and technology are fast diluting the relevance of national boundaries and barriers. These laws are intended to deal with problems and challenges which the world community is facing while pursuing the path of development. Legal Education must keep pace within these new phenomena.

Justice R.S.R. Maurya in his paper "Environmental Pollution and its Control" notes that the world has reached a level of growth in the twenty-first century as never thought before while the crisis of economic growth is still persisting. The key questions which often arise are as to whether economic growth can supersede the concern for environmental protection, and whether sustainable development, which can be achieved only by way of protecting the environment and conserving the natural resources for the benefit of humanity and future generations, could be ignored in the garb of economic growth or compelling human necessity. He concludes that one must realize the difference between need and wastage in order to protect the natural resources from wastage.

1 Part II: International Environmental Law

International environmental law is an area of public international law marked by the application of principles which have evolved in the environmental context, such as the precautionary and no harm principles. It also draws from the general corpus of public international law.[1] The "environment" is an amorphous term that has thus far proved incapable of precise legal definition saves in particular contexts. Environment includes natural resources both abiotic and biotic, such as the air, water, soil, fauna and flora and the interaction between the same factors; property

[1]Malcolm D. Evans, *International Law* (Oxford university Press, 2nd ed.,) at 657.

which forms part of the cultural heritage; and the characteristic aspects of the landscape.[2]

Notwithstanding some early twentieth-century conservation treaties, modern international environmental law basically came into being in the 1970s. It includes both global environmental agreements with large numbers of parties; regional pacts, such as agreements managing various transboundary water bodies and air sheds; and some customary law. International environmental law, however, often addresses problems that have their roots in some of the unfortunate by-products of private productive activities. Thus, the Convention to Regulate International Trade in Endangered Species of Flora and Fauna (CITES) addresses the sale of animal parts in international trade, an economically valuable activity. The Montreal Protocol on Ozone-Depleting Substances addresses substances serving valuable economic functions, refrigerating food, cooling down cars, acting as solvents in a variety of industrial processes, and protecting crops from pests. The Kyoto Protocol to the United Nations Framework Convention on Climate Change addresses the burning of fossil fuels, an economic activity at the heart of transportation, manufacturing, and the production of electricity for homes and offices.[3]

Global environmental law's content is the common set of legal principles developed by national, international, and transnational environmental regulatory systems. It includes substantive values, principles, and procedural approaches. Among the most readily identifiable principles and tools are the precautionary principle, polluter pays, environmental impact assessment, and polluting permitting. One might also readily assert that protection of public health and the integrity of ecology systems are among the most important substantive goals in environmental law.[4] Global environmental law is thus the manifestation of complementary trends of proliferation of environmental treaties and other international legal instruments, rapid development of national environmental law and governance systems across the world, and the growing importance of transnational law. It represents the inevitable realization that effective solutions to global environmental problems require not only government-to-government legal commitments, but also the development of law and governance institutions at the national and sub-national level. Such law and governance institutions are critical not only to engage national governments but also to allow for effective intervention into the role of the private sector and individuals in environmental degradation.[5]

The precautionary "approach" teaches that "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for

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[2]The Council of Europe Convention on Civil Liability for Damage Resulting from Activities Dangerous for the Environment, 1993, Article 2(10).

[3]David M. Driesen, "Environmental Protection, Free Trade and Democracy", *AAPSS*, 2006, at 603.

[4]Tseming Yang and Robert V. Percival, "The Emergence of Global Environmental Law", 36 *Ecology Law Quarterly,* 2009, at 623.

[5]Tseming Yang, "The Top 10 Trends in International Environmental Law", available at: http://digitalcommons.law.scu.edu/facpubs/769, at 3 [accessed on October 20, 2013].

postponing cost-effective measures to prevent environmental degradation."[6] The polluter pays principle in environmental law means that the party responsible for producing pollution should also be responsible for paying for the damage done as a result of that pollution to the national environment.[7] The extended polluter responsibility which was first described by the Swedish government in 1975 means that the cost of pollution is to be internalized into the cost of the product to shift responsibility of dealing with pollution from governments to those responsible.[8]

The concept of sustainable development was defined by the famous Brundtland Report of 1987, the World Commission on Environment and Development. Sustainable development "meets the needs of the present without compromising the ability of future generations to meet their own needs." The international community's most recent comprehensive statement on sustainable development, the Johannesburg Declaration on Sustainable Development, is almost entirely silent on the question of the rights of future generations. In the entire 37-paragraph document, there are but two references to responsibilities to "future generations." In Paragraph 6, there is a declaration of "our responsibility to one another, to the greater community of life and to our children." In Paragraph 37, the conferees "solemnly pledge to the peoples of the world and the generations that will surely inherit this Earth that we are determined to ensure that our collective hope for sustainable development is realized." Neither the declaration of responsibility "to our children" nor the pledge to "the generations that will surely inherit this Earth" implies the existence of any duty—moral or legal—to preserve the environment for their benefit.[9]

The above identified substantive international environmental law may be understood in the context of protection of marine environment, protection of the atmosphere, nuclear risks, other hazardous substances and activities, and conservation of nature.

The protection of the marine environment was one of the key issues at the 1972 Stockholm Conference. Pollution of the ocean, and concerns about their limited absorption capacity, formed a key thrust of 1970s law making activities. Dumping is one area of regulatory activity where this progression is particular marked.

In relation to protection of atmosphere there are three principle areas of international regulatory activity, these are transboundary air pollution, ozone depletion, and global warming. The *Trail Smelter* arbitration was an early instance of an inter-State claim arising in respect of harmful transboundary effects of air-borne pollutants. This case involved a single detectable source of air pollution (sulfur dioxide emissions from the smelter) causing quantified harm to health and property.

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[6]The Rio Declaration on Environment and Development, 1992, Principle-15.

[7]*Id.,* Principle-16.

[8]See also OECD document "Extended Polluter Responsibility", 2006.

[9]Jonathan C. Carlson, "International Environmental Law, Climate Change, and Intergenerational Justice", 8 *CLI Background Paper,* 2009, at 17 available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1525018. [accessed on October 22, 2013].

Problem arises if the sources of air pollution are diffused and its harmful effects upon environment are widespread. The purpose of 1979 LRTAP is to prevent, reduce, and control transboundary air pollution from both new and existing sources.

In relation to ozone depletion the United Nations Environment Programme (UNEP) in 1981 launched negotiations for the conclusion of a treaty, culminating in the adoption of the 1985 Vienna Convention for the Protection of the Ozone layer. The 1987 Montreal Protocol—like the 1997 Kyoto Protocol to the Climate Change Convention-radically altered this picture in several respects. In addition to introducing specific targets for the reduction and eventual elimination of ozone-depleting substances, subsequent adjustments or amendments of the Protocol have introduced financial (the multilateral funds) and technical incentives to encourage developing country adherence to the Protocol.

The 1992 UN Framework Convention on Climate Change was one of two treaties adopted at the Rio Conference. The principle objective of the Convention is "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." Notwithstanding the obligations contained in Article 4, it was not until the negotiation of the 1997 Kyoto Protocol that developed country parties committed themselves to explicit targets for the reduction of the chief greenhouse gases and to the development of international mechanism for ensuring the fulfillment of these commitments. The core obligation of the Protocol is contained in Article 3(1) which states that Annex I parties "shall, individually or jointly, ensure that their aggregate anthropocentric carbon dioxide equivalent emission" of specific greenhouse gas "do not exceed their assigned amounts" and that overall emission of such parties are reduced by at least 5% below 1990 levels in the commitment period 2008–2012.

The nuclear sector has been the subject of considerable regulatory activities at the international level. At the regional level, the 1960 Paris Convention on Third-Party Liability in the Field of Nuclear Energy and the 1963 Brussels Supplementary Convention, as amended, were adopted under the auspices of the Nuclear Energy Agency of the Organization for Economic Cooperation and Development (OECD). The 1994 Convention on Nuclear Safety is designed to ensure the safe operation of land-based nuclear power plants.

Apart from the nuclear sector there has also been considerable regulation of other hazardous activities and substances. The 1989 Basel Convention on the Transboundary Movement of Hazardous Wastes and their Disposal was the first in the field. Further, the 1998 Rotterdam Convention on Prior informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and the 2001 Stockholm Convention on Persistent Organic Pollutants also regulate the field. The 2000 Cartagena Protocol to the 1992 Biodiversity Convention is addressed to the transboundary movement of living modified organisms.

The multilateral species and habitant treaties include, the 1971 Ramsar Convention on Wetlands of International Importance especially as waterfowl Habitant; the 1972 UNESCO Convention Concerning Protection of the World Cultural and Natural Heritage (WHC); the 1973 Convention on International trade in Endangered Species of Wild Fauna and Flora (CITES); the 1979 Bonn

Convention on the Conservation on Migratory Species of Wild Animals (Bonn Convention); and the 1992 Convention on Conservation of Biological Diversity (CBD).

Thus as it stands today, international environmental law is made up of a complex web of multilateral regional and bilateral treaties, soft law instruments, principles of customary international law and judicial decisions.[10] Developed in response to a realization on the part of the international community that transboundary pollution cannot be prevented, regulated, and controlled without the international cooperation, international environmental law has been slowly moving from classic State responsibility approach to damage to a regime of international cooperation.[11] Here, international cooperation in the field of environmental protection can take such forms as consultation, the exchange of information, notification of environmental risk to potentially affected States and assistance in mitigation of environmental harm. The law in this area also increasingly recognizes the environment's inherent link with human rights and economic development, stresses the importance of environmental impact assessment in the transboundary context, and requires States to comply with due diligence standards in the prevention, reduction and control of pollution. It also establishes a strict liability regime in the case of damage to the environment caused by space objects. Sustainable development, State's common but differential responsibilities, the notion of intergenerational equity, the precautionary approach and the polluter pays principle all contributes to the fabric of contemporary international environmental law.[12]

In India, there is a well-developed legal architecture of environmental protection. Article 48 of the Indian Constitution requires the State to protect and improve the environment and to safeguard the forest and wildlife, and Article 51 A (g) makes it the fundamental duty of every citizen of India to protect and improve the natural environment, including forests, lakes, rivers and wildlife, and to have compassion for living creatures. To compliment these constitutional protections, there are over 200 union and state statutes that concern environmental protection directly or indirectly. However, it is believed that the existence of these over 200 statutes has not prevented environmental degradation in India, which, on the contrary, has increased over the years.[13] These statutes include the Water and Air Acts; and the 1986 Environmental (Protection) Act. The 2010 National Green Tribunal Act (NGTA) is another piece of legislation with far-reaching significance. It provides for establishment of National Green Tribunal for the effective and expeditious disposal of cases related to environment, including the enforcement of legal rights related to environment and to relief and compensation for damage to persons and property. In addition to these landmark environmental statutes, there is a rich corpus

[10]B.C. Nirmal, "Nuclear Energy Law and International Environmental Law", 51(2) *Indian Journal of International Law*, 2011, at 62.

[11]M.N. Shaw, *International Law*, (First South Asian Edition, 2010) at 845.

[12]B.C. Nirmal, *Supra* note 10, pp. 62–63.

[13]*Indian Council of Enviro-Legal Action* v. *Union of India* AIR 1996 1146.

of homespun environmental jurisprudence that the Indian judiciary has slowly but steadily developed over the years.[14] In particular, the Supreme Court of India has repeatedly held that sustainable development,[15] the precautionary principle, the polluter pays principle,[16] the principle of intergenerational equity[17] and the public trust doctrine[18] are not only part of Indian constitutional law but are also implicitly recognized by existing environmental statutes.

With the above background, Part II of the book seeks to portray the contemporary issues related to the topic of international environmental law. Sudhir Kochhar in his work relates the aspect of food security with sustainable development. He suggests that after two decades, it has been observed at Rio 20+ that only some programs are in place; but funding is still lacking.

The handling of transactions on IPR-protected agrobioresources is a techno-legal matter, which requires authenticity of information disclosed. He finds that it could be worthwhile collecting, collating, and publication of authentic, searchable details of location-specific agrobioresources. Coupled with this, the public or searchable databases of appropriate technologies for specific use of these biological/genetic resources would be relevant in stepping-up formal and effective material transfers and benefit sharing arrangements to eventually promote their sustainable use prospects.

Andrew Ejovwo Abuza brings to fore the discussion on the United Nations Conference on Sustainable Development held in June 2012 in Rio de Janeiro. The chapter was not originally presented in the conference; however, it was invited by the editors to add the dimension of RIO+20 to the book. Abuza refers to the 1992 United Nations Conference on Environment and Development which produced several international environmental agreements. He opines that it is rather sad that 20 years after the Conference these agreements have not been fully implemented. Worse still, the 2012 United Nations Conference on Sustainable Development held as a 20-year follow-up to the 1992 Conference failed to take concrete actions to fully implement these agreements. The chapter reflects on Post-Rio discussions on environmental protection. Abuza concludes that international efforts to tackle environmental challenges as represented by international environmental agreements have not yielded the desired results. He suggests that there is need for states to rise above pettiness and other parochial interests and conclude legally binding environmental agreements and be prepared to meet their obligations under same or face appropriate sanctions. He emphasizes that government needs to partner with the people on environmental issues as enjoined by Rio Declarations.

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[14]B.C. Nirmal, *Supra* note 10, at 72.

[15]*Vellor Welfare Forum* AIR 1996 SC 2715; *Bombay Dyeing and Mfg. Co. Ltd.* v. *Bombay Environmental Action Group* (2006) 3 SCC 434; *Narmada Bachao Andolan* v. *Union of India* (2002) 10 SCC 664.

[16]As regards the standard of care required for hazardous or inherently dangerous operations, see *M. C. Mehta* v. *Union of India*, (1987) SCR 819.

[17]*State of Orissa and Sri Jagannath Temple Puri Management Comm.* v. *Chintamani Khuntia* AIR 1997 SC 811.

[18]*M.C. Mehta* v. *Kamal Nath* (1999) 6 SCC464; *Intellectual Forum Tirupati* AIR 2006 SC 1350.

Gazi Saiful Hasan and Sheikh Ashrafur Rahaman analyze the origin and status of principles of international environmental law and the impact of these principles on national laws of Bangladesh. As Bangladesh is in vulnerable condition in terms of environmental hazards, it is ripe time to take measures for preventing and mitigating such calamitous situation as well as for promoting and protecting the quality of environment. Hasan and Rahaman wrote that domestic environmental laws of most of the countries of the world are getting shaped on the basis of different international initiatives. Bangladesh is also trying to adopt these principles in various enactments.

V. Rajyalakshmi at the outset notes that climate change due to global warming is a challenge that is yet unmet. Despite the long-held understanding that global warming is more due to human activities than the natural causes and hence the solution to the problem also lies to a great part in our plans and actions, nothing remarkable has happened so far and the global warming is continuing unabated. This however does not mean that no attention has been paid or no action is taken to combat the problem of climate change. The climate change has indeed been taken up as a serious challenge, at least, since the Earth Summit, 1992 and continuous efforts have been going on. But the prospects of majority of climate change strategies and actions encounter blocks difficult to surmount leaving them at cross roads. She presents her views on the emerging technologies in the context of climate change. The major problem is the scientific uncertainty about their environmental safety. From the legal perspective, the challenge is the lack of provision or incompatibility with existing law or exposure to conflicting laws. She argues that the major challenge in this regard is the resistance of the developed states to respect their commitments for Technology Transfer. The reasons for reluctance to share technology are not merely political alone but extend to the economic prospects of trade in technology.

Saligram Bhatt presents insight in the current perspectives on environmental law. He summarizes major issues of concern to national and international society in the field of environmental law. His chapter attempts to provide detail of humankind's response to challenges faced by global society. It also refers to the inspiration that humans have got by the global environment movement to shape a better social and economic world order.

Ali Mehdi presents a critique on the working of authorities established for protection and conservation of environment. The last quarter of the last century witnessed formulation and implementation of the policy and the laws focusing on environment for its protection and conservation. Mehdi notes that the apex court in India has shown its serious concern and contributed remarkably to activate the executive for execution of these laws. The court has come forward and by the process of interpretation and innovation under the caption "complete justice" laid down guidelines and directives to save the environment without impeding the process of development and hindering the progress of people. The chapter focuses on the functions of different agencies created under the various laws and the source and jurisdiction of the Central Empowered Committee and examines its contribution.

Vinod Shankar Mishra proffers some reflection on human rights to water. He notes that the Water Policy changes in the country reflect changes at the global

level. Globally, international water instruments such as the Dublin Statement and the Ministerial Declarations of the World Water Forum have sought to recast water as an "economic good" and a "human need," which necessarily sidelines concerns embedded and inherent in perceptions of water as a "public good" or "social good," and that of water as a "human right." India is also under intense pressure to reform its water sector. In fact, the World Bank has been a key player in India, working behind the scenes in building consensus over Water Policy reform both at the centre and in states. He concludes that in the light of principles of distributive justice and equity, water should be made available to all sections of the society on the basis of need and not on the basis of financial considerations.

Sukanta K. Nanada in his paper rightly notes that the climate change has severely affected the human being and the whole world at large. It has affected the poor disproportionately and the subsistence farmers around the world have experienced an unpredictable season and social problems which are directly linked with the rising temperature. The alterations in the global climate would result in large-scale change in the ecosystem, disastrous disruption of livelihood, living conditions, human health and above all the economic activity. In the post-Rio Scenario, the richer countries responded unfavorably and inadequately to the concept of "common but differentiated responsibility." He argues that now in the changed scenario both the developed and developing countries should come forward and share the "common but differentiated responsibility."

Ajendra Srivastava examines the principle of sustainable development. As a concept it seeks to establish a close affinity between the policy goals of development and the environmental protection. The author argues that the principle needs more clarity to make it an action oriented principle. Further, the concomitant principles of sustainable development, such as polluter pays principle, precautionary approach principle, and environmental impact assessment need to be more vigorously adopted in policies and actions to achieve the objectives of sustainable development. The chapter also examines the differing views on the legal status of sustainable development. Srivastava argues that the view which considers that sustainable development is not a customary rule of international law ignores the modern approach regarding the formation of a custom in international law which relies more on *opinio juris* than state practice. The chapter shows that while international case law provides little insight into the issue whether sustainable development is a binding norm of international law, courts in India have explicitly accepted sustainable development as a principle of customary international law.

2 Part III: International Trade Law

International trade law defined broadly as a group of loosely connected rules, norms or customs governing trading or commercial activities between states has developed abreast with international trade and commerce. Information on the evolution of

international trade law is as scanty as information on the history of international trade itself.

The earliest form of body of rules and customs which we call international trade law was found in the rules and customs governing merchants and maritime matters, which was then called as maritime law. In Europe, the earliest maritime law emerged in the land adjoining the Mediterranean Sea, where sea-borne commerce was governed by trade usage or custom. Although there were regionally accepted codes for maritime and trade matters, the law varied from city to city and country to country. After the fifteenth and sixteenth centuries, sea-borne trade got internationalized, moving from Mediterranean Sea to Atlantic. This raised the demand for uniformity in international trade law and maritime law.

The development of International trade law may be divided into three stages. The first was the period of the medieval law merchant; the second was the incorporation of the medieval law merchant into the national systems of law in seventeenth to nineteenth centuries, and the third period is the contemporary phase which began after the Second World War. The development of international trade law in the nineteenth century was characterized by an extensive use of bilateral treaties. In the twentieth century and specially, after the second World War, bilateral treaties became an essential way to define the trade relationship between various countries. Many erstwhile colonies obtained independence. These counties started governing relationships in accordance with the principles of the United Nations Charter. The new world order established on the UN Charter forces countries to treat each other equally and reciprocally.

The General Agreement on Tariffs and Trade (GATT) took effect in 1948 and served as a forum for trade negotiations whereby every signatory country could enjoy the concessions of every other signatory (otherwise known as most-favored nation status). Membership in the GATT not only brought the United States into the multilateral trade regime but also provided a vehicle to rebuild the post war economies of Europe and Japan. The Uruguay Round achieved the most fundamental reform of global trade rules since the creation of the GATT. The Round established the World Trade Organization (WTO), extended international trade rules beyond goods to include intellectual property rights and trade in services, and greatly improved procedures for countries to resolve disputes over international trade. The WTO rules propose to encourage the creation of stable and predictable trading system, which consists of fair and transparent trade rules for all the participants.

The most important of the new issues that were brought to the table in the Uruguay Round had not made their way into either the Havana Charter or GATT. One was agriculture, a topic that was isolated from GATT in the 1950s and was the subject of failed negotiations in the Kennedy Round (1962–1967). Negotiators reincorporated agriculture into the system in the Uruguay Round, with countries making commitments affecting not only market access but also their production and export subsidies. The other significant additions in the Uruguay Round concerned services and intellectual property rights, with the General Agreement on Trade in Services (GATS) bringing a vast area of economic activity within the jurisdiction of

the WTO and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs Agreement) making a large body of existing international law enforceable within the WTO dispute settlement system.[19]

At the Uruguay Round, developed nations (the US, in particular), under pressure from their pharmaceutical corporate lobby, proposed to introduce a uniformly strong IPR regime on all nations as part of a multilateral trading agreement through the TRIPs agreement. This was in spite of the fact that a strong intellectual property right (IPR) goes against the core philosophy of the WTO's principle of promoting competition and free trade. Moreover, there is now a large body of theoretical and empirical literature, firmly establishing that IPR regime must be endogenously determined within the economy, depending on the technological learning and capability levels of the country in question. Exogenous imposition of a strong IPR regime may severely hinder the process of technological catch up. Ironically, there is historical evidence to suggest that the developed world has had the flexibility to adopt an appropriate IPR regime during their process of development and technological learning according to the needs and priorities. Countries like Switzerland, Germany, Japan, and Italy did not adopt a strong product patent regime for a long time.[20]

According to the theory of comparative advantage, the underlying economic model of WTO, each country should produce what it can do best, and trade that good with the products other countries are able to produce best, with the profit from exports, countries can buy goods that they cannot reasonably produce themselves. This increases trade and promotes the economic performance of all member states, which eventually raises the standard of living and ensures full employment and the growth of real income.[21]

The rules of the WTO aim at the reduction of trade barriers. Besides periodic tariff negotiations to lower tariffs, any other barriers to trade, such as quotas or import and export restrictions are prohibited.[22] National trade regulations have to comply with GATT principles. The core principle is the principle of non-discrimination, which is provided in all WTO agreements. According to the principle of Most Favoured Nations Treatment, goods from different countries must be accorded the same treatment at the borders, when entering the country. The GATT also contains rules to avoid disguised trade restrictions, i.e., national rules, non-discrimination on the surface which constitutes a de-facto discrimination of foreign products.[23] The most important examples of these are technical standards

[19]Craig Van Grasstek, "The History and Future of World Trade Organisation", *WTO Publications*, 2013, at 48.

[20]Amit Shovon Ray and Sabyasachi Saha, "India at the WTO: Evolving Priorities, Unaltered Paradigm", 2(2) *BJIR*, Marília, 2013, pp. 244–271.

[21]Jackson J.H., *The World Trading System: Law and Policy of International Economic Relations* (Cambridge University Press, 1977) at 14.

[22]The General Agreement on Tariff and Trade, Article XI.

[23]Gudrun Monika Zagel, "WTO & Human Rights: Examining Linkages and Suggesting Convergence", 2(2) *VDJ*, 2005, at 10.

and sanitary standards, which have to comply with the Agreement on Technical Barriers to Trade (TBT Agreement) and the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement). The principle of non-discrimination applies to "like products" meaning products with the same properties, nature and quality, function or end-use in the market. The determination of "likeness" between domestic and imported products turns on the existence of a competitive relationship between these products in the marketplace.[24] Panel Reports and the Appellate Body have concluded that the assessment if or not such competitive relationship exists can only be made on a case-by-case basis involving an "unavoidable element of individual, discretionary judgment." Relevant criteria employed in this assessment include (i) the properties, nature, and quality of the products; (ii) the end-uses of the products; (iii) consumers' perceptions and behavior in respect of these products; and (iv) the tariff classification of the products.[25]

The WTO establishes a framework for trade policies. Five principles are of particular importance in understanding both the pre-1994 GATT and the WTO

(a) ***Non-discrimination***: It has two major components first, Most favoured nation treatment (MFN) Rule and second, the National Treatment Rule. Both are embedded in the main WTO rules on goods, services, and intellectual property, but their precise scope and nature differ across the areas.[26] Article 1 of GATT has established the benchmark of a very broadly worded unconditional MFN obligation with respect to trade in goods. The number of challenging MFN issues is on the rise, particularly with reference to the application of the concept to the new subject of trade in services and trade-related intellectual property matters. It is not always entirely clear that the MFN concept as applied to goods will easily transfer to services or intellectual property.[27] MFN means grant someone a special favor and you have to do the same for all the other WTO members.

National treatment means that imported and locally produced goods should be treated equally and was introduced to tackle non-tariff barriers to trade. National treatment requires that foreign goods once they have satisfied whatever border measures are applied, be treated no less favorably in terms of internal taxation than like or directly competitive domestically produced goods.[28] National treatment ensures that liberalization commitments are not

[24]European Communities—Measures Affecting Asbestos and Asbestos-Containing Products, Report of the Appellate Body of 12March, 2001, WT/DS135/AB/R, para. 87–99 (European Communities–Asbestos).

[25]European Communities—Asbestos, *Id*., para. 101.

[26]Rameshwar Rai and Dinesh Kumar Jha, *Encyclopedia of World Economy*, Vol. 5 Crescent Publishing Corporation (New Delhi), 2011, at 261.

[27]Jackson, John H., *The World Trading System: Law and Policy of International Economic Relations*, (Satyam Books, New Delhi, First Indian Reprint, 2012) at 157.

[28]*Supra* note 22, Article III.

diluted through the imposition of domestic taxes and similar measures. The requirement that foreign products be treated no less favorably than competing domestically produced products gives foreign suppliers greater certainty regarding the regulatory environment in which they must operate.[29]

(b) ***Reciprocity***: It is the fundamental element of the negotiation principle. It reflects both a desire to limit the scope for free trading that may arise because of the MFN rule and a desire to obtain payment for trade liberalization in the form of better access to foreign markets.[30]

(c) ***Binding and Enforceable Commitments***: Liberalization commitment and agreements to abide by certain rules of the game have little value if they cannot be enforced.[31] If a country perceives that actions taken by another government have the effect of nullifying or impairing negotiated market access commitments or the disciplines of the WTO it may bring this situation to the attention of the government involved and ask that the policy be changed. The complaining country can invoke the WTO dispute settlement procedure.

(d) ***Transparency***: The world becomes a darker, less certain, and less stable place when information is sparse or poorly distributed among interested parties. This is why transparency is a key governing principle of the WTO. Members have an obligation to pursue a transparent approach in their dealings. Policies should not be a secret. Procedural aspects of their application and decisions taken in pursuance of their objectives should not be secrets either.[32] It is a legal obligation embodied in Article X of the GATT and Article III of the GATS.

(e) ***Safety Values***: The GATT provides for some exceptions which allow states to deviate from the WTO principles in areas to pursue specifically defined political interests. The possibilities are limited. The reason for the narrow scope of possible exceptions is that member states often try to justify protectionist measures with the need to protect non economic concerns. Article XX of GATT is the general exception clause which lists specific public policy reasons that justify the deviation of GATT principles.

Perhaps the most tangible contribution of the WTO is to be seen in its Dispute Settlement Unit (DSU). It has brought the rule of law to international trade. It is correct to say that the DSU of the WTO is a jewel in the crown of the WTO trading system. Yet the WTO dispute settlement machinery is far from perfect. The main flaws in DSU appear to be (i) contradiction that exists between transparency, participation, and the prompt settlement of disputes; (ii) non-existence of integrated

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[29]Hoekman Bernard and Susan Prowse, *The Political Economy of the World Trading System* (Oxford University Press, New Delhi, 2001) at 42.

[30]*Id.,* at 43.

[31]Rameshwar Rai, *Supra* note 26, at 262.

[32]"*The Future of Trade: The Challenges of Convergence*", Report of the Panel on Defining the Future of Trade convened by WTO Director-General Pascal Lamy, 24th April, 2013, at 29, available at: http://www.wto.org/english/thewto_e/dg_e/dft_panel_e/future_of_trade_report_e.pdf. [accessed on November 12, 2013].

mechanism for the application of Panel and Appellate Body decisions; (iii) provisions for least developed countries (LDCs) in the DSU are too general to promote effective enforcement; and (iv) due to its strict rule based system the dispute settlement body's functions have been limited.

The WTO faces two sets of Legal challenges. First concerns its ability to fulfill the core task of bringing trade within the rule of law—an area in which GATT made a good but incomplete starts. A related problem may be to strike a balance between the legislative (Negotiations) and judicial (Litigation) function of the institution. The second challenge comes from the conflict that may arise between trade law and other area of theory and jurisprudence. One of the most serious problems in the multilateral trading system is the growing divergence between the interests and the influence of leading countries in that system. The willingness and ability of the countries to shoulder the burden of the system remain uncertain.[33] The political challenges stems directly from the economic issues. Economic and political powers are more widely distributed in the WTO period than was the case in the GATT period and the configuration of power in this system may be less conducive to multilateral liberalization than was the case in the old days of top down leadership.

It is true that the GATT and the WTO have not done all that they could for developing countries. But then there is really no alternative to multilateral trade and the WTO, the institution that represents it. It is generally acknowledged that despite its shortcomings the WTO is a unique forum to frame and interpret rules aimed at enhancing of the benefits of multilateral trade. It is for this reason that despite painful slow pace of negotiations on key issues after the Hongkong Ministerial meets of the WTO, all members decided to continue with the Doha Round.

It is argued that the Doha Round has been deadlocked since the collapse of intense negotiations till the middle of 2008. Since then, most of the major economies are facing financial and economic crises, and it is one of the major reasons for slow progress of concluding it.[34] One of the major reasons for the stalemate is an underlying lack of political will among some WTO members. But, in the Ministerial Conference, held in Geneva in December 2011, the WTO members reiterated their faith in the Doha Round and identified the need to fully explore different negotiating approaches with principles of inclusiveness and transparency. Additionally, at the 2012 G-20 Meeting in *Los Cabos*, the G-20 leaders also reiterated that they "stand by the Doha Development Agenda (DDA) mandate" and

[33]Van Grasstek Craig, "*The History and Future of the World Trading Organisation*", Geneva WTO Publication, 2013, at 28, available at: www.wto.org/english/res_e/booksp_e/historywto_e.pdf. [accessed on November 12, 2013].

[34]Bipul Chatterjee and Archana Jatkar, "Unlocking the Doha Impasse Imperative of a Balanced Bali Package", Briefing Paper No. 07/2013, *CUTS International*, at 1, available at: http://www.cuts-citee.org/pdf/Briefing_Paper13-Unlocking_the_Doha_Impasse_Imperative_of_a_Balanced_Bali_Package.pdf. [accessed on November 12, 2013].