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We are the planet, fully as much as its water, earth, fire and air are the planet, and if the planet survives, it will only be through heroism. Not occasional heroism, a remarkable instance of it here and there, but constant heroism, systematic heroism, heroism as governing principle.

— Russell Banks
Continental Drift 40 (1985)

*

*We dedicate this Book
to our Children and Grandchildren
(in chronological order)*

<i>Anne</i>	<i>Malin</i>
<i>Timothy</i>	<i>Dharm</i>
<i>Matthew</i>	<i>Martin</i>
<i>Monica</i>	<i>Johannes</i>
<i>Holly</i>	<i>Tanya</i>
<i>Rebecca</i>	<i>Arjun</i>
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<i>Dharmini</i>	<i>Andrew</i>
<i>Heather</i>	<i>Jeremy</i>
<i>Adam</i>	<i>Shelby</i>

*and to
all other children
present and future*

*

Foreword

Maurice F. Strong

The global nature of many environmental issues—climate change, acid rain, ozone depletion, shared water and nuclear accidents, to name a few—has made national boundaries a spurious anachronism, and in some ways a dangerous fiction. In a world crying out for international solutions, educators concerned about the environment must not only pass on traditional knowledge, or train specialists who concentrate on their specific disciplines within domestic boundaries, but must also embrace an international, interdisciplinary curriculum that will equip students to become practitioners on a world stage.

One does not need to be a lawyer to appreciate that the legal academies of the world produce many of our future leaders, decision-makers and law-givers. A vitally important mission for all concerned with global environmental protection is to ensure that our potential leaders are alerted to the challenges confronting our shared planet, sensitized to their complexity, and encouraged to think creatively in finding answers to these problems. Law forms an important part of our educational curriculum, and international environmental law has a crucial role to play in helping us all to meet the global environmental challenges.

The Stockholm Conference on the Human Environment in 1972 may well have been the cocoon from which the chrysalis of international environmental law emerged as a legal subject in its own right. Whatever the occasion of its birth, there is no doubt that the subject has grown to become a crucially important facet of global environmental protection, as the multitude of treaties and other instruments found in the Documents Supplement of this book testify. The United Nations Conference on Environment and Development at Rio de Janeiro in 1992 (the Earth Summit or UNCED) demonstrated how the superstructure of global environmental protection and sustainable economic development were significantly undergirded by international legal instruments such as the Conventions on Climate Change and Biological Diversity. Having been privileged to be Secretary-General of both of these historic events, I have witnessed the growing importance and vitality of international environmental law; yet I have also noticed the dearth of comprehensive treatment of the subject. It is with great pleasure, therefore, that I welcome this book by Lakshman Guruswamy, Sir Geoffrey Palmer and Burns Weston.

To manage our common future on this planet, we will need a new global legal regime based essentially on the extension into international life of the rule of law, together with reliable mechanisms for accountability and enforcement that provide the basis for the effective functioning of national societies. We are a long way from this today. UNCED defined many of the needs for continued development of international law, including the strengthening of existing instruments and agreements on new ones. However, even this would move us only a short distance toward establishing an effective international legal regime.

The Rio Declaration and Agenda 21 are major new examples of “soft law,” based on political agreement rather than on legally binding instruments. Although not binding, they nevertheless provide the basis for voluntary cooperation, which enables the action process to proceed, and paves the way for the negotiation of binding agreements. While we cannot be satisfied with these as long-term substitutes for enforceable legal measures, we should not minimize their value. After all, as long as we do not have an effective and enforceable legal regime at the international level, we must rely on political commitment as the primary basis for cooperative action in negotiating and enforcing legal instruments.

Meanwhile, the authors of this book have carefully chosen a wide range of issues that accurately mirror those challenges we currently confront. They engage the reader in soliciting answers based on a problem-solving approach which is exceptionally revealing and instructive as to the nature of the challenges as well as the solutions. I believe that both lawyers and non-lawyers will benefit from such a problem-oriented approach.

The book is exhaustively researched, analytically incisive and of enormous relevance to law and policy. It is refreshing to see a book dealing with a vitally important, yet difficult, subject living up to the highest expectations of a scholarly offering. Undoubtedly, for years to come, this book will remain an authoritative source of materials, ideas, policies and laws for that growing body of international civil servants, policy-makers, law-makers, diplomats, non-government organizations, business leaders and environmental activists concerned with the burgeoning field of international law.

Maurice F. Strong

Chairman, Ontario Hydro;

Former Secretary General, Stockholm Conference on the Human Environment (1972),
and United Nations Conference on Environment and Development (UNCED) 1992

1994

Preface

International Environmental Law (IEL), once overshadowed by its prominent parents, International Law and domestic Environmental Law, has not merely come of age. In the five years following the first edition of this book, it has continued to grow and mature demonstrating an ability to respond to global environmental challenges in a manner that its progenitors international and national laws were, and are, unable to do.

Historically, the world community assigned to International Law an essentially nightwatchman's role relative to the natural environment, leaving to domestic Environmental Law the activist's role of actually solving environmental problems. This was of course because assaults upon the natural environment either did not have or were not perceived as having much transnational impact or significance.

But clearly such is not the case today. Now, many environmental problems outstrip the capacity of an international legal order that celebrates state sovereignty and tolerates a culture or mindset that believes it only marginally important to understand and solve these problems. And much the same can be said of environmental problems that implicate domestic legal orders as well. While national environmental laws often are illuminated by, and enacted because of a conceptual understanding of environmental complexities, they possess neither the jurisdiction nor the power to deal with the extra-territorial—indeed global—implications raised by most contemporary environmental problems.

In short, contemporary problems such as global warming, ozone layer depletion, desertification, and the destruction of biodiversity essential to the entire global community demand far more. Indeed, even problems of trans-frontier pollution, long familiar to traditional International Law, require a sharp break from the juridical past.

The first edition of our problem-oriented coursebook did not purport to rebaptize International Environmental Law even in 1994. The subject had received extensive recognition and was admitted into the corpus of international law many years ago.¹ A rich volume of books, journals, and articles, as amply excerpted and otherwise noted in our text, continue to testify to the growing importance and challenge of the subject. We are conscious of exploring a subject capable of creating and developing conceptual and doctrinal frameworks sufficient to cope with both the international and environmental character of daunting transnational environmental problems.

Amidst the doctrinal and interpretative outpourings about the subject, however, ours remains the only problem-oriented coursebook on International Environmental Law. We continue to fill the gap, and therefore it behooves us to justify, albeit briefly, our pedagogical approach.

1. INTERNATIONAL ENVIRONMENTAL LAW (L. Teclaff & A. Utton eds., 1974) explicitly recognized the birth of the new subject, as did also J. SCHNEIDER, WORLD PUBLIC ORDER OF THE ENVI-

RONMENT: TOWARDS AN INTERNATIONAL ECOLOGICAL LAW AND ORGANIZATION (1979), while LAW, INSTITUTIONS AND THE GLOBAL ENVIRONMENT (J. Hargrove ed. 1972) anticipated its arrival.

In choosing to write a problem-oriented coursebook rather than a treatise, we acknowledge our indebtedness to the predecessor pioneering efforts of Professors Burns H. Weston, Richard A. Falk, and Hilary Charlesworth in their *International Law and World Order: A Problem-Oriented Coursebook*, also published by West Publishing Company and now in its third edition. Further, we unapologetically identify ourselves in general with those who rank issue-spotting, problem-solving, and synthesis as more important in the legal learning experience than the assimilation and comprehension of raw, disembodied knowledge. Indeed, we endorse the percipient findings of a 1942 A.A.L.S. report stating that:

[U]nder the “problem method” deduction of legal principles becomes not the end of legal education, but the means to an end . . . , the adequate solution of problems which a dynamic society precipitates in ever new combinations. . . . The “problem method” recommends itself as a pedagogical device for re-orienting legal education to its major basic task [I]t more effectively forces the law student to reflect on the application of pertinent materials to new situations and accustoms him to thinking of case and statute law as something to be used, rather than as something merely to be assimilated for its own sake.²

It is our experience that the exercise of identifying and framing issues in factual context, organizing and evaluating relevant law and policy, and applying that law and policy to the facts not only hones analytical skills but kindles students’ interests and fires their enthusiasm far more effectively and efficiently than doctrinal exposition. Especially when used in a simulated exercise whether it be a moot court, or a diplomatic or multilateral negotiation, the problem method provides practitioner skills of brief and memorandum writing, oral arguments, negotiating and judging in a way that mere doctrinal exposition does not.

Some who are unfamiliar with the problem method may feel that coursebooks employing the problem method lack a structured description and analysis of the substantive corpus of IEL, and do not offer the kind of expository treatment of the province of IEL presented by a treatise or even a Nutshell. We do not think such observations apply to this coursebook. While we agree that our book is primarily a teaching vehicle as opposed to a scholarly treatise on IEL, our approach to the subject does not diminish the pedagogic value of the book. Our opinion, reinforced by the fact that one of us has been involved in writing the “Nutshell” on IEL,³ is that the preferred way of establishing, clarifying, and understanding IEL is in terms of its practice and application through problems that offer a fairly comprehensive and in depth understanding of the principal issues and doctrinal bases of IEL. This is what we have sought to do.

Because, however, IEL increasingly attracts students who have had no prior instruction either in International Law generally or in the character and scope of the global environmental challenge in particular, we begin our entire adventure, in Part I, by assuming no previous knowledge of either. Utilizing the “real

2. M. JOSEPHSON, LEARNING AND EVALUATION IN LAW SCHOOL 58 (1984). Josephson, borrowing from B. BLOOM, TAXONOMY OBJECTIVES OF EDUCATIONAL—HANDBOOK 1: COGNITIVE DOMAIN (1956), ranked learning in ascending order of difficulty and importance as: (1) knowledge, (2)

comprehension or understanding, (3) issue spotting, (4) problem-solving, (5) judgment, and (6) synthesis.

3. LAKSHMAN GURUSWAMY & BRENT HENDRICKS, INTERNATIONAL ENVIRONMENTAL LAW IN A NUTSHELL (1977).

world” problem of Russian nuclear pollution of the Arctic to make our theoretical points, Part I begins with a relatively detailed doctrinal exploration of the key doctrines, principles and rules of International Law without which it is impossible to understand or apply IEL. It closes, in Chapter 4, with a hard look at “The Global Environmental *Problematic*” as viewed through diverse outlooks and approaches that may be seen to define and fashion IEL. In an essentially consensual, horizontal legal system that cannot depend on enforcement through institutionalized vertical decision-making structures typical of domestic legal orders, it is particularly important to understand the ideological, philosophical, political and psychological well-springs of international behavior. It is our hope that the perspectives delineated here will inform, fertilize, and reinforce the process of formulating answers to the issues raised in the problems in Part II.

Then, in Part II of our coursebook, pausing first in Chapter 5 to summarize the applicability of State Responsibility to environmental wrongs, we present the student, in Chapters 6-11, with a series of hypothetical problems bearing fact patterns that mirror the “real world” in which we live. We believe hypothetical problems avoid associations and biases that potentially inhibit principled analysis, while simultaneously permitting students to probe perceptively the complex webs of fact, law and policy that typically confront international law decision-making in the “real world.” We have sought to achieve a compromise between the need to give students a firm grasp of the doctrines, principles, and rules of IEL and the need to stimulate in them a healthy appreciation of the difficulties involved in making these doctrines, principles and rules truly operational in everyday life.

We have chosen to categorize the problems under the environmental rubrics of atmosphere, hydrosphere, lithosphere and biosphere and a miscellaneous section, recognizing that a holistic and integrated environment may for pedagogical and analytical purposes need to be divided into its various elements. It behooves us, however, to stress that while our classification of the problems does not offer a cognitive description of the multifaceted socio-legal issues raised by them, they do in fact represent and symbolize geo-political realities as well as the bio-regions of the world.

There are at least three other ways in which the problem chapters could be organized. First, it is possible to analyze the impact of these problems according to their global, regional and transnational character. Second, it is equally reasonable to treat them as traversing international challenges posed by recognized sources of pollution or by specific pollutants, or ubiquitous social phenomena such as population growth. Finally, it is possible to classify them as problems of natural resources and biodiversity. All three approaches give rise to substantive legal regimes, principles, rules, norms and procedures that are explored and applied. They include the foundational norms of sustainable development, along with a variety of obligations dealing with pollution control, resource exhaustion and remedies.

Global issues, for example, are dealt with in chapters 12, 6, 11, 7, and 10. Global Warming, the quintessential global problem of our times is addressed by Chapter 12 on the Negotiation of a Long Range Protocol on Climate Change. This Chapter also deals with sources of specific pollutants called greenhouse gases (GHGs), and confronts the grim reality of exploding population. Popula-

tion and human rights are separately addressed in Problem 11-3. In a different context, the three problems in Chapter 6 illustrate the extent to which Antarctica mirrors a wide range of other global environmental problems from biodiversity and resource conservation to pollution. The global challenges posed by diminishing biodiversity are also dealt with in a number of problems including 10-3, and 11-1, while ozone is the subject of 7-2. The impact of trade law in the form of the General Agreement on Tariffs and Trade (GATT) on the environment is dealt with in Problem 11-1.

Regional treaties are becoming an increasingly important feature of IEL, and are dealt with directly by Problems 7-1, 11-2, and 10-1. Problem 7-1 raises the issue of acid rain in the European Union, while 11-2 addresses NAFTA and the Environmental Side-Agreement. Both of these problems deal with the status and legal standing of individuals and NGOs in IEL, while Problem 10-1 concerns a regional fishing agreement dealing with conservation.

Moving on to sources and specific pollutants, sources of pollution such as land-based pollution are encountered in Problem 8-1, and vessel pollution in Problem 8-2, while those dealing with specific pollutants include Problem 7-3 on nuclear pollution, and Problem 9-2 on toxics. Other problems that deal with specific pollutants include 7-1, 7-2, 8-1, 8-2, 9-1, and 11-2. Social phenomena that have a pervasive influence on the global environment include population and human rights dealt with in 11-3, and environmental warfare in Problem 11-4.

There are a number of problems that focus directly on a variety of issues surrounding natural resources. They include Chapter 6 (Antarctica), and Problems 8-3 (groundwater), 9-3 (desertification), 10-1(fish), 10-2 (elephants), 10-3 (biodiversity) and 11-1(endangered species).

The feedback we have received about the first edition confirms our view that the problem method offers the preferred way of understanding the meaning and substantive content of the law and institutions of IEL, and remains an outstanding vehicle for teaching both analytical and practitioner skills. Placing asserted legal principles in their scientific, social, political, economic and technological context reveals their true meaning or lack of meaning, along with extent or limits of law and of lawyering with much greater clarity than didactic or Socratic methods of teaching.

Finally, in Part III, we turn to the future. In Chapter 12 we engage the student in a simulated negotiation of a fictional draft protocol to the U.N. Framework Convention on Climate Change (**Basic Document** 3.21), helping her or him to understand the complexities of the practical issues that nations encounter when regulating our environmental future, while simultaneously hammering home the significance and utility of proleptic law-making, especially in the environmental realm. And in our closing chapter, Chapter 13, we urge upon the student an impressionistic overview of the established and emerging normative, institutional and procedural responses to the theoretical and practical issues posed by the global environmental *problematique* set forth in Chapter 4, and explored in its diverse parts in each of the problems that make up Part II.

We turn now to three editorial matters. *First*, since this coursebook is organized in problem-oriented rather than doctrine-oriented fashion, we have made a special effort to provide a comprehensive substantive index. The intent is to assist instructors and students in locating subject-matter that of necessity is scattered throughout the coursebook rather than being set out in one discrete

segment. *Second*, original footnotes in excerpted readings generally are omitted. However, when they are included they are denoted by numbers, with our own footnotes being indicated by letters. *Third*, we have tried to be as current as possible. Information cut-off dates for the most part being December 1998.

A concluding word about our collaboration. Despite approaching our task from different perspectives and geographic locales, and free of bonding to a particular school of jurisprudence or thought, the unique universality and commonality of our subject has been brought home to us in the astonishing confluence of our thinking on the principal issues we have traversed. It is not difficult therefore, to take common responsibility for our collective effort, including our mistakes and shortcomings. It indeed has been a collective effort, with each of us critiquing and assisting the work of the other three virtually every step of the way.

Finally, we are pleased to acknowledge with grateful appreciation, as we have done especially of Jason Aamodt, Sally Bullen, and Tiffany McCready on the title page, all who have assisted us in this endeavor. Their names and our thanks may be found in the Acknowledgments. To anyone whose name we may have inadvertently though not excusably omitted, we offer our heartfelt thanks also.

These are not times for passivity, but for active, clearheaded thinking and informed decisiveness in meeting the critical and perilous ecological conditions that face our planet. Indeed, in the spirit of novelist Russell Banks, quoted at page iii, *supra*, it is a time for “heroism as governing principle.” Please join us in this exciting time, and do not hesitate to let us know your views. All are welcome.

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April 1999

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The eclectic and multidisciplinary nature of many of the readings that follow require special library expertise, and this book would not have been possible without the help of the library staffs of our respective universities. We are specially indebted to Carol Arnold of the University of Tulsa Law Library for her proven professionalism, thoughtfulness and unique abilities.

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