

INTRODUCTION

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As human populations grow and land and natural resources come under greater pressure, land use planning has been an increasingly important subject of policy discussion at the national level. Governments, communities, and indeed all stakeholders are being forced to recognize the importance of not only rationalizing the *use* to which land is put, but even more importantly ensuring that land and resources are stewarded ecologically for future generations. Rooted in the inherently logical yet incredibly complex notion of sustainable development, intelligent land use and stewardship policies are being implemented in different regions of the world. The progress, however, is far too slow to bridge the gap between current development patterns and existing resources effectively. For example, urban growth continues unabated, while cities are unable to provide basic levels of sanitation, employment, health, and education for current residents.

This book is an attempt to survey the global experience to date in implementing land use policies that move us further along the sustainable development continuum. Its chapters include diagnoses of the challenges of implementing sustainable land use policies that appear in different parts of the world. These chapters reveal that some problems are common to all jurisdictions, while others appear unique to particular regions. The book also includes chapters documenting new and emerging approaches such as reforms to property rights regimes and environmental laws. Other chapters offer comparisons of approaches in different jurisdictions that can present insights that might not be apparent from a single-jurisdiction analysis. The chapters are described further in the following sections.

The book is the second in a series of publications issued by Cambridge University Press in connection with the International Union for the Conservation of Nature and Natural Resources (IUCN) Academy of Environmental Law's annual colloquia on topics relating to sustainable development. The second such colloquium, held in Nairobi, Kenya, in October 2004, centered on the theme of land use for sustainable development. In addition to providing an excellent venue, holding the colloquium in Nairobi was significant in several ways. By attracting some 160 scholars from around the world, it helped bolster the University of Nairobi's global reputation as a place for discussions of an academic issue of global significance. The colloquium also provided an important boost for environmental law and policy teaching in Africa. For example, many African professors have since requested that the University of Nairobi provide leadership in founding an African association of environmental law professors. The theme of the colloquium also resonated strongly with many participants from African countries, given the importance of land use issues to environmental sustainability, food security,

and poverty eradication. In a wonderful coincidence, during the colloquium Professor Wangari Mathai, who gave the opening address, was announced as the first ever environmental advocate to receive a Nobel Prize.

As editors, we had to make the difficult decision of choosing how best to organize the wealth of information contained within the chapters of the book. We had two basic choices – to organize the book by substantive themes that recurred within various chapters or to organize the book by region. While both approaches had merit, we chose the latter because we considered it important to emphasize the truly global representation of the materials contained within this work. As is immediately apparent from a glance at the contents, the book includes chapters from every major region of the world. We felt it was important to showcase this diversity to encourage readers to take the opportunity to learn about both the familiar and the unique challenges faced by countries in different regions of the world. In the rest of this introduction, we briefly summarize the themes that recur within various chapters in order to help guide a reader's journey through the book toward a particular topic of interest.

The chapters in the book break down loosely into two main themes. First, a number of the chapters offer assessments of constraints or challenges to sustainable land use management in different countries and regions. Second, a number of the chapters discuss emerging approaches to help advance sustainable land use. All of these major themes have subthemes within them. To bridge the themes and provide some context to the conference, Akio Morishima graced the conference with a series of distinguished lectures entitled *Challenges of Environmental Law – Environmental Issues and Their Implications to Conventional Jurisprudence*. This series of lectures, reproduced in the book, recounts how environmental problems in Japan have compelled challenges to traditional legal systems and theories and have been instrumental in the evolution of new jurisprudence and environmental laws. Professor Morishima traces the evolution of environmental law through the courts, particularly through four major lawsuits on pollution in Japan. He addresses new environmental issues such as increased risks with increasing industrial pollution and the multitude of stakeholders, particularly in the urban context. He calls for a new system of rights for this shift in social paradigms, as societies move toward sustainability.

A group of the chapters within the “constraints and challenges” theme consider the issue of finding a path for sustainable development in the context of the ever-growing urban landscape. Parvez Hassan, for example, examines the links between urbanization and environmental challenges in Pakistan, while Muhammed Tawfiq Ladan in the chapter “Environmental Law and Sustainable Land Use in Nigeria” illustrates the inadequacies of Nigeria's laws relating to mining forestry and town planning in addressing environmental problems. Another series of chapters within the “constraints and challenges” theme offer diagnoses of national policies relating to land management. Amber Prasad Pant's chapter “Nepal's Legal Initiatives on Land Use for Sustainable Development” examines the history, policies, and laws relating to land use planning, proposing suggestions for improvement. George Okoth-Obbo examines the environmental impact of the large-scale refugee presence in Kenya, arguing that it is important to develop a national governance structure (including changes to environmental laws) to plan and manage refugee activity, including the ecological impacts.

Several chapters examine the challenge of reforming existing laws in ways that better reflect local community customs and values, and that involve communities directly in

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sustainable land management activities. Ed Couzens's chapter, for instance, examines the challenge of translating Western-styled philosophies of elephant preservation and ivory trade restrictions with the need to find viable conservation solutions for local communities that share the landscape with elephants. In the chapter "Land Use Planning in Mexico," Gabriella Pavon and Juan Jose Gonzalez explore how to develop a sustainable urban system within an environmental land use plan to help overcome poverty and achieve effective social development. Mekete Bekele examines Ethiopia's national legal framework for implementing some of the principles and operative provisions of the Convention on Biological Diversity relating to communities' access to the genetic resources found in their backyards. In the chapter "Managing Land Use and Environmental Conflicts in Cameroon," Nchunu Sama emphasizes the importance of reforming land use laws in order to address inequities caused in part by the imposition of colonial land policies on indigenous traditions such as communal land tenure.

Several chapters address the tool of environmental impact assessment (EIA), stressing the role that well-designed EIA policies can and should play in helping move policies toward sustainable land use planning. This subtheme in essence provides a bridge between the evaluation of constraints and challenges and the discussion of new and emerging approaches. In the chapter "Environmental Impact Assessment: Addressing the Major Weaknesses," Michael I. Jeffery provides a comparative analysis of the EIA implementation process in Australia and Canada, highlighting the importance of procedural fairness in environmental decision making and the need to facilitate public participation as a way of achieving that goal. Evaluating the use of EIA in South Africa, Michael Kidd similarly emphasizes the importance of procedural fairness. Kidd focuses on the "four Ps" – provisions, process/procedure, people, and politics – that he argues are central to the operation of EIA. Lana Roux and Willemien du Plessis in "EIA Legislation and the Importance of Transboundary Application" analyze the EIA processes in South Africa, Namibia, and Swaziland, pointing out the similarities and differences in the requirements and processes in these countries. In a chapter comparing the application of EIA in the Nigerian and U.S. oil and gas industries, Bibobra Bello Orubebe argues that EIA laws must be strengthened to take into account the power of large, multinational corporations such as those that exist in the oil and gas industry. In a related chapter, Sunee Mallikarm and Nuntapol Karnchanawat evaluate the use of environmental management plans to help balance conservation and exploitation of natural resources. Their chapter evaluates in some detail the adaptation of Denmark's spatial and environmental management planning in Thailand's Khon Kaen Province. Juan Rodrigo Walsh in his chapter "Argentina's Constitution and General Environment Law as the Framework for Comprehensive Land Use Regulation" examines the impact of minimal standards legislation that resulted from Argentina's constitutional reform in 1994, looking in particular at the link between rural and urban land use policies and the need to integrate conservation policies into the broader policy framework.

The second theme of "emerging approaches" also includes several subthemes. One group of chapters explore reforms of property rights regimes and governance structures. With respect to property rights, Patricia Kameri-Mbote examines how changes to property rights structures can facilitate effective wildlife management, while Nyokabi Gitahi makes the case for the need to provide incentives for wildlife management through environmental easements provided for under the Environment Management and Coordination Act, 2000. In terms of reform of governance regimes, Louis J. Kotzé proposes

a governance model that breaks out of the “line department” model and moves toward a more lateral regime that incorporates environmental issues into other dimensions of decision making. W. J. Kombe examines environmental planning and management in Tanzania, which has moved from bureaucratic-controlled to stakeholder-driven urban planning and management. After providing a historical review of the development of land use laws within different levels of government in the United States, John R. Nolon argues that while the flexibility of land use mechanisms helped achieve sustainable land use policies in the United States over the course of its history, there are now opportunities to reform land use policies strategically to provide some cohesion to the modern system. In her chapter “Land Use Planning, Environmental Management, and the Garden City as an Urban Development Approach in Singapore,” Lin Heng Lye demonstrates how the city-state transformed its economy in a short time frame without sacrificing environmental quality, in large part because of the help of strong land use planning and environmental laws.

As so many other writers in this field do, mainly for the lack of a better term, we and many of the authors in this book have used the term *land use planning* in a way that is meant to include not only land and soil, but freshwater and salt water as well. A number of the chapters in the book consider how to incorporate effective land use planning and stewardship in the realm of water. In her chapter, Linda A. Malone considers the implications of the 2004 U.S. Ocean Commission report for land use reform to improve ocean water quality by taking an ecosystem-based approach, coordinated at the national level with international cooperation. Ian Hannam and Du Qun analyze the legal framework of a partnership program in China designed to help control land degradation. Karen Bubna-Litic looks at the management of irrigated land in Australia. Emmanuel Kasimbazi in the chapter “The Development of Environmental Law and Its Impact on Sustainable Use of Wetlands in Uganda” effect of environmental law on wetlands in Uganda.

Another two chapters focus on the role of protected areas in successful land use management. The chapter “Protection of Natural Spaces in Brazilian Environmental Law” by José Rubens Morato Leite, Helene Sivini Ferreira, and Patryck de Araújo Ayala discusses natural areas protection in Brazil, taking into account the context of the risk to society, the global environmental crisis, and obstacles that emergent countries face in reaching a satisfactory level of environmental protection. Koh Kheng-Lian’s chapter “ASEAN Heritage Parks and Transboundary Biodiversity Conservation” examines the opportunity for achieving conservation by working in a regional, transboundary model.

Albert Mumma examines the role of administrative tribunals in the sustainable management of land use, looking in particular at Kenya’s Environment Tribunal. Mumma’s chapter argues that Kenya possesses institutional arrangements for resolving environmentally and land use-related disputes and for facilitating sustainable land use, but notes that significant administrative obstacles remain.

A chapter by Nathalie J. Chalifour explores a whole set of alternative policy instruments – economic instruments – that she argues have the potential to help policymakers implement sustainable land and resource decisions. She provides a theoretical overview of these instruments, which range from taxes and fees to subsidies and trading systems, and discusses some of the challenges involved in implementing them at the national policy level.

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A series of chapters examine the potential for advancing sustainable land use management through international and regional initiatives. In his chapter “Climate Change Adaptation and Mitigation: Exploring the Role of Land Reforms in Africa,” H. W. O. Okoth-Ogendo argues that a land reform process that included policy changes, tenure reform, redesign of land use structures, and reconceptualization of land administration functions could provide opportunities for the creation of an adaptive threshold and mitigation interventions in the management of climate change effects in Africa. David R. Hodas argues that climate change offers African countries an enormous sustainable development opportunity, by allowing nations in the region to avoid the errors of highly fossil-fuel-dependent countries and move directly into the development of renewable energy resources. Michel Prieur examines the European Landscape Convention, which is the first regional convention exclusively dedicated to land use planning. The Convention’s main innovation is to take landscape into account as a permanent and ordinary component of daily life – an element of the human environment that needs special and continuous attention independent of its value or beauty.

The international community has long recognized the need to ensure that ongoing and future development is conducted sustainably. Participants at the Rio Conference in 1992 affirmed, and reaffirmed in Johannesburg in 2002, their commitment to pursuing sustainable development, mapping out specific action plans and emphasizing the need for a global partnership on sustainable development. These high-level commitments are politically important, but irrelevant if they are not translated into reality on the ground. We hope this book will help to accomplish this objective by providing information and analysis to the global community about what is working, where challenges remain, and how to chart a way forward.

Challenges of Environmental Law – Environmental Issues and Their Implications to Jurisprudence

Akio Morishima

The theme of my lectures in the next three days, in brief, is “The Challenges of Environmental Law to Conventional Jurisprudence.” This is because there is a need for conventional jurisprudence to catch up with changing environmental issues. I will address such questions as the following:

- What is presented as a new issue of law
- How environmental law studies as a new form of jurisprudence have dealt with this issue
- What are the issues to be solved by environmental law and environmental law studies at this moment, and
- What issues environmental law should deal with and what strategies it should employ in the future

I was asked to adopt one theme for each lecture, if possible, and to make the three lectures into one coordinated “Distinguished Lecture on Environmental Law.” In response to this difficult request, I would like to structure the lecture as follows: In Lecture I on the first day, which is titled “Land Use and Environmental Law,” I would like to explain why and how a new system of laws is needed to solve a variety of social issues caused by environmental issues that goes beyond the conventional laws and jurisprudence on land use. In Lecture II, I would like to focus on “The Courts and Environmental Law.” Here, I will discuss what role the Courts (Judiciary) can play in setting up new principles of environmental law and of environmental legislation. On the last day, in Lecture III, I would like to discuss “New Approaches of Environmental Law.”

As will be mentioned in Lectures I and II, matters that were not dealt with in conventional law studies, including risk management of chemical substances and coordination of interests between different stakeholders with different values, have become serious problems in dealing with environmental issues. Environmental law had to take them as priority issues and, using new concepts and rules, solve them in actual lawsuits. Then, as global environmental issues came to be considered as urgent issues, environmental law had to be involved in the transformation process of social systems, seeking a new legal system to support the paradigm shift from the current system of multiproduction and multiconsumption to a sustainable and recycling-based society. This has just started, and there are many things to be done in the future. In Lecture III, I would like to explain the future direction of environmental law and the steps for environmental law to take in realizing a sustainable society.

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In this lecture, I will talk about environmental issues in Japan and the development of environmental law in Japan, in which I have been deeply involved in the past 30 years, but it is not for the purpose of explaining specific cases from Japan to you. It is partly because I have detailed and correct information on Japanese cases, but mainly because I believe that the Japanese experience will be of some help to the construction of a new system of laws in other countries as well. According to my old esteemed friends from other countries, environmental laws in their countries, like those in Japan, were developed through challenges against traditional legal systems and theories. Despite the differences between the Common Law and Civil Law, or the differences in court proceedings and in lawmaking, or in legal techniques, the lawyers in each country, I believe, try to deal with environmental issues with common concern and equal recognition. We will be facing further challenges of environmental issues in the future and have to resolve those issues. In doing so, if Japan's experience could provide some assistance in building up innovative theories on environmental law through the wisdom and intellect of those present today, I should say it is my utmost pleasure and honor as a lawyer from Japan to have helped in this process.



LECTURE I: LAND USE AND ENVIRONMENTAL LAW

1 LAND USE AND ENVIRONMENTAL ISSUES

Basically, changes in the environment are caused by natural phenomena. However, the large (over 250 percent) increase in global population from 2.5 billion in the middle of the 20th century to 6 billion by the end of the century, has brought the realization that various human-related activities taking place in various parts of the world are affecting the global environment in various ways, one of which is deforestation. Human activities are conducted in connection with some form of land use – industrial activities are carried out at each industrial facility built on an industrial site, and urban life is made possible by the use of land for residences, offices, roads, and parks. Needless to say, farmland is used for agriculture and forests are for forestry. Even activities on the sea, such as fishery and maritime transportation, need land for ports and harbors as well as for anchoring sites. Furthermore, rivers, lakes, and swamps all inevitably use land in a variety of ways. Human activities that take place on a particular land site will have a direct effect on the land on which the activities take place, and possibly also on neighboring areas. However, such activities may also indirectly affect land and areas farther away. For example, the cutting of trees in the upper stream area of a river will dry up the groundwater in the downstream area or have an adverse effect on fishery resources around the mouth of the river. Thus, it can be seen that various forms of land use affect the environment both directly and indirectly. Moreover, pollution generated from human activities diffuses into the air and water, leading to environmental pollution.

To prevent any further degradation of the environment, it is important to curb extensive land use. It is true that the ultimate cause of environmental degradation stems from inappropriate land use, but it is the actual human activities on the land that affect the environment very widely, for example, deforestation, development of farmland,

construction of roads, agriculture, construction of buildings, production of chemicals, and generation of wastes (fumes and sewerage). Moreover, a variety of entities, both public and private, are involved in these activities. Under these circumstances, restrictions on land use will not be effective unless the activities conducted by specific entities are restricted.

2 OBJECTS AND CONTENTS OF ENVIRONMENTAL LAW

The purpose of environmental law is to restrict human activities so that the land can be used without inflicting adverse effects on the environment and good environmental conditions can be maintained. However, considering the wide range of stakeholders and the wide variety of human activities, the environmental law system should go beyond the conventional legal system of land use, which regulates only the activities of land users, which are mainly composed of landowners. Environmental law is a unique field of law in that it covers all stakeholders whose activities have impacts on the environment – these include national and local governments, businesses and companies, nongovernmental organizations (NGOs), and citizens. Environmental law can take appropriate legal measures to deal with actual impacts on the environment caused by the various activities of these stakeholders. As a legal system, environmental law should step over the concept of restricting land use to deal with such public property as air, quality of water, and ecosystems, or with such extensive and complex environmental conditions as climate change. As a result, environmental law is required to set up a new legal area with its own system and logic different from the conventional jurisprudence that has been dealing with individual human beings and property.

Every country has started building its environmental law systems only recently, and so, compared with the long history of traditional legal studies in Europe, environmental law is still in its infancy. According to conventional views, environmental law might be defined as a system of law that aims to maintain the order of human society by taking some social measures to alleviate various effects on the environment caused by human activities. Here, environmental preservation has been regarded in a passive way, as law for preventing and alleviating environmental degradation. However, at the World Summit for Sustainable Development (WSSD) in 2002, the concept of sustainable development (SD) was expanded to cover not only environment and development (business) issues but also society itself. It was considered that the concept of sustainable development involves a paradigm shift to a recycling-oriented society, showing a great conceptual transformation of the environment itself. This means that the object and the goal of environmental law could further expand in the future, and environmental law would be expected to play a more active role in covering not only such traditional environmental issues as those issues relating to air, water, and nature, but also socioeconomic systems themselves, including the environment.

So far, the object of environmental law has been changing in accordance with the changes in human activities that affect the environment. For example, in the course of industrialization, air and water pollution were identified, and the object of environmental law at that time was to control the pollution. The destruction of nature and erosion of land as a result of extensive development of forestry and farmland became the subject at issue. Then, the issues of excessive consumption of fossil fuels, acid rain, and climate change drew people's attention. What is worse, all these human activities

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are not conducted independently but are related to each other. For example, extensive land development, industrialization, and increased consumption of fossil fuels are interlinked or are conducted as a part of the other activities. In environmental law, we have to deal with all these related issues in a systematic and integrated manner. As for the content of environmental law, it has to cover interdisciplinary areas in addition to those traditional areas of public law, private law, international law, and the constitution. On top of that, environmental law is now requested when seeking legal solutions to various social issues that conventional laws were not intended to deal with, such as risk management of chemical substances for which reliable scientific data have not been obtained. Moreover, for the realization of a sustainable society through the transformation of social structures, even issues that take place in the atmosphere or the protection of the benefits of future generations come under the ambit of environmental law.

3 CHALLENGES TO THE TRADITIONAL LAW SYSTEM

Since the Industrial Revolution started in England in the 18th century, parts of Europe have become gradually industrialized, but they did not realize until the early 20th century the need for building up a new legal system to protect the environment against pollution caused by industrialization. In the conventional legal system, consideration of the environment took the form of limitation of land use by landowners, which generated a few rules in private law such as nuisance laws to adjust land use between neighboring landowners, and in public law, limitation rules on the use of real estate such as zoning in city planning and building codes. In the 20th century when industrialization expanded rapidly and globally, in most Western developed societies, people became aware of the serious destruction of the natural environment, and its expansion and escalation. In the international community, this concern was first expressed at the Conference on the Human Environment held in Stockholm in 1972. Little by little, it became clear that conventional legal systems could not deal with these issues. To seek practical solutions to the environmental problems that societies were facing, challenges to the conventional legal system and jurisprudence arose gradually in the 1970s, aiming to develop new philosophies and techniques for environmental law.

In the conventional legal system of Western society and other developed countries, the right to exercise land ownership was secured, and landowners could freely use, profit from, and dispose of their land. There are, in principle, no restrictions on the use of land except for a few limitations of land use in compliance with city planning. According to the traditional idea of law, the acts of public authorities, including the public authority on private ownership, should be minimized. Factory owners considered that the emission of fumes into the air and the discharging of sewage from drains into rivers were acts arising from the ownership of land and within their legitimate right as owners. Economists took it for granted that owners did not need to pay for the pollution, naming it as an externality. Owners of forest land cut trees growing on their land and sold them by right of their ownership, which was the right thing to do according to traditional laws of land ownership and land use. However, as environmental issues were being recognized as social issues and it was becoming clear that the traditional law was not capable of dealing with these social issues, challenges to the traditional legal system started in various classes of society in various ways. Direct campaigns by citizens against

companies that caused pollution, legal actions against governments and businesses, requests for new laws to lawmaking bodies, and changes in voting patterns: all these were part of the challenges to the traditional legal system. New concepts of environmental law were suggested, and some of the traditional legal concepts were rejected, leading us to the evolution and development of a new environmental law system. In spite of these efforts, environmental issues are becoming serious much faster than the development of environmental law, and especially in the area of climate change, we have not even had clues for solutions. Under the circumstances, we have not found solid environmental law systems, or the future direction of environmental legal studies, but it is still in motion, changing day by day, to follow the changes in the nature of environmental issues.

4 ENVIRONMENTAL ISSUES IN JAPAN

To help you understand my lecture, I would like to start by explaining briefly about environmental issues in Japan and their social and economic backgrounds just after World War II. In 1945, Japan was defeated in the U.S.–Japan war. The repeated air raids during World War II burned most of the major cities down to the ground, and industries were totally destroyed. For the government of Japan in the 1950s and 1960s, the priority was put on reconstruction of the economy. First of all, dams were constructed to develop electric power resources, and with the energy shift to petroleum after the 1950s, industrial sites (petrochemical industrial complexes) were developed in various places in Japan. The government of Japan at that time gave most importance to economic growth and ignored environmental conservation in policymaking processes. This resulted in a number of cases of health damage in the late 1960s among those who were living around the industrial sites. These cases were suspected to be related to air and water pollution and became serious social problems. However, legal systems to deal with environmental pollution were not developed smoothly because of the lack of knowledge of chemical substances that polluted the environment, the difficulties of identifying the source of pollution that was diffused into the air and water, and the broad extent of citizens living in a wide range of areas affected. The laws to deal with environmental pollution have to manage “risks” that are different from those presumed in conventional laws, which made it more difficult to develop pollution-related laws, especially when the Japanese government was not active in regulating pollution.

In 1952, Japan was liberated from U.S. occupation. In the 1960s, demands for more direct participation in the policymaking process increased among the general public, which were symbolically reflected in the series of demonstrations in 1960 against the revision of the Japan–U.S. Security Treaty, when tens of thousands of citizens demonstrated in front of the Diet Building. At the same time, many grassroots campaigns against environmental pollution were seen in various parts of Japan. A period of turmoil on university campuses occurred in the late 1960s, triggering a breakdown of psychological barriers for young people in challenging traditional authorities that had long reigned over Japanese society. It seems to me that this social and historical background has had some effect on the attitudes and psychology of young lawyers who challenged conventional interpretation of the law to establish innovative theories of environmental law. This will be mentioned in Lecture II.