

The Precautionary Principle In The 20th Century Late Lessons From Early Warnings

This text explores the state of affairs in 2003 regarding the implementation of the principle in the law of the sea in different areas: like, pollution of the marine environment, conservation and management of living marine resources and transboundary transports of radioactive and hazardous wastes.

The precautionary principle, while subject to varying interpretations and having over 12 different definitions in international treaties and declarations, is fast becoming a fundamental principle of international

environmental law. This paper explores the precautionary principle, referred to by some as the precautionary approach, from five perspectives. Section one introduces the history, scope and spectrum of meanings surrounding the principle. Section two highlights the principle's implementation in national legal systems. Section three examines the close relationship of precaution with other principles of sustainable development, particularly pollution prevention, inter-generational equity and public participation. Section four discusses the relationship of the precautionary principle to science and scientific research. Section five suggests legal options for incorporating the precautionary principle into CEPA, for

example, through a preambular statement or specific factoring into substantive parts.

Environmental Principles and Policies uses environmental and social principles to analyse the latest wave of economic-based and market-orientated environmental policies currently being adopted around the world. This book provides an in-depth examination of six key principles that have been incorporated into international treaties and the national laws of many countries: * ecological sustainability * the polluter pays principle * the precautionary principle * equity * human rights * public participation These principles are then used to evaluate a range of policies including pollution charges, emissions, trading, water markets,

biodiversity banks and tradable fishing rights. Environmental Principles and Policies is easily accessible, using non-technical language throughout, and - in what sets it apart from other books on environmental policy-making - it takes a critical and interdisciplinary approach. It does not set out policies in a descriptive or prescriptive way, but analyses and evaluates policy options from a variety of perspectives. This enables readers to gain a thorough grasp of important principles and current policies, as well as demonstrating how principles can be used to critically assess environmental policies. Great uncertainty typically surrounds decisions and management actions in the conservation of biodiversity

and natural resource management, and yet there are risks of serious and irreversible harm for both biodiversity and the humans that rely on it. The precautionary principle arguably underlies all international conservation efforts and promotes acting to avoid serious or irreversible environmental harm, despite lack of scientific certainty as to the likelihood, magnitude or cause of harm. This book is the first to examine the application of the precautionary principle to biodiversity conservation and natural resource management, incorporating perspectives from scientists, economists, lawyers and practitioners from both developing and developed countries. It analyses the application and impacts of the principle in many

areas including forestry, invasive alien species, wildlife trade, protected areas and fisheries, in a range of national and international contexts. Particular attention is drawn to issues of equity, livelihoods, science and politics, and the book provides guidelines for applying the precautionary principle to biodiversity conservation and natural resource management.

Approaches from the Nordic Countries, EU and USA
Philosophy and the Precautionary Principle
Protecting Public Health and the Environment
Risk Regulation in Europe
Precautionary Tools for Reshaping Environmental
Policy
Rethinking Risk and the Precautionary Principle

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In *The International Seabed Authority and the Precautionary Principle*, Aline L. Jaeckel offers an insightful analysis of the work of the International Seabed Authority and examines whether the Authority is implementing the precautionary principle in regulating and managing deep seabed minerals. The purpose of this publication is to provide the background rationale and support for WHO's working paper *Dealing with uncertainty - how can the precautionary principle help protect the future of our children?*, prepared for the Fourth Ministerial Conference on Environment and Health held in

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Budapest, Hungary, in June 2004. The debate around the precautionary principle has provided many insights into how to improve public health decision-making under conditions of uncertainty. This publication should further support approaches to attaining the concurrent goals of protecting adults, children and future generations and the ecosystems on which we depend and enhancing economic development, sustainability and innovation in science, research and policy. [Ed.]

The aim of this book is to examine how governments deal with these problems by evaluating the role of

science in policymaking in Britain. The debate on these issues reveals a split between those who uncritically accept science in the service of government - the sound science approach; and those who would take a more precautionary stance, which entails that where there may be potential problems with a technology, a wider form of assessment than that carried out under the sound science approach should be considered to ensure it is safe - the precautionary approach. This work will appeal to scholars interested in the British Government's approach to the regulation of risk in

environmental and public health matters. Viewed from the perspective of environmental management, this study describes the implications and applications of the precautionary principle - a theory of avoiding risk even when its likelihood seems remote. This principle has been employed in the United Nations Framework Convention on Climate Change and the North Atlantic Convention, yet it is not widely understood. This study examines the history and context of the principle, and its applications to law, governmental policies, business and investment, scientific research and international

relations.

The Precautionary Principle

Risk analysis and the precautionary principle as
general principles of EU food law

Assessing the Application of the Precautionary
Principle

A Matter of Priorities

The Freedom of Scientific Research

The Precautionary Principle in the Law of the Sea

The thematic analysed is the evolution of the
Precautionary Principle. It is a valuable tool for
developing adequate decisions in situations where there is

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large uncertainty . The situations of uncertainty can be of different types and different entities. Indeed, the precautionary principle encourages policies that protect human health and the environment in the face of uncertain risks. In recent years, legislators' attention has focused increasingly on actions to protect the environment and the human health. On the international plane, nations have accepted the precautionary principle as a basis for their policies. For these motivations, the analysis of the PRECAUTIONARY PRINCIPLE appears an interesting thematic to study: indeed, it is important to understand if the principle could be an opportunity to improve and

protect our world or a bureaucratic quibble."

This challenging book takes a broad and thought-provoking look at the precautionary principle and its implementation, or potential implementation, in a number of fields. In particular, the essays within the book explore the challenges faced by public decision-making processes when applying the precautionary principle, including its role in risk management and risk assessment. Frameworks for improved decision making are considered, followed by a detailed analysis of prospective applications of the precautionary principle in a number of emerging fields including: nanotechnology, climate change.

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The precautionary principle, or precautionary approach, is now widely accepted in environmental law and policy at international and, increasingly, national level. However, the principle remains highly controversial, its meaning contested, its acceptance and implementation inconsistent across sectors and contexts and its impacts unclear. This paper aims to inform and assist IUCN and its members in developing greater shared understanding of the meaning and implementation of the principle in the context of biodiversity conservation and natural resource management, respecting priorities of both conservation and sustainable development. It examines the meaning of

the precautionary principle and its incorporation into biodiversity and resource management law and policy, and discusses a series of issues raised by its implementation in this sector for biodiversity conservation and for livelihoods and poverty alleviation.

The precautionary principle is widely seen as fundamental to successful policies for sustainability. It has been cited in international courts and trade disputes between the USA and the EU, and invoked in a growing range of political debates. Understanding what it can and cannot achieve is therefore crucial. This volume looks back over the last century to examine the role the principle played or

could have played, in a range of major and avoidable public disasters. From detailed investigation of how each disaster unfolded, what the impacts were and what measures were adopted, the authors draw lessons and establish criteria that could help to minimise the health and environmental risks of future technological, economic and policy innovations. This is an informative resource for all those from lawyers and policy-makers, to researchers and students needing to understand or apply the principle.

The Precautionary Principle in Marine Environmental Law

Implementing the Precautionary Principle

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Environmental Principles and Policies

Biodiversity and the Precautionary Principle

The precautionary principle in environmental law. Neither arbitrary nor capricious if interpreted with equilibrium

The Precautionary Principle and the Social Standard

"This vitally important book asks: Can the precautionary principle make uncertainty judiciable in the context of liability for the consequences of climate change, and, if so, to what extent? Drawing on the full range of pertinent existing literature and case law, the author examines the

precautionary principle both in terms of its content and application and in the context of liability law. She analyses the indirect means offered by existing legislation being used by environmental groups and affected individuals before the courts to challenge both companies and regulators as responsible agents of climate change damage"--Page 4 of cover. From fisheries to persistent organic pollutants to climate change itself, no other environmental principle in environmental law has produced as much

controversy as the precautionary principle. Unlike a preventive approach in which action is taken provided that the threats to the environment are tangible, with a precautionary approach, authorities are prepared to tackle risks for which there is no definitive proof that the damage will materialize. The ramifications of this increasingly apparent approach are profound and cut across all areas of risk assessment and management, environmental law, policy and regulation in every major sector. However, to date little thought

has been dedicated to the implementation of the precautionary principle in a wide array of environmental circumstances. This authoritative handbook addresses the legal aspects of how the precautionary principle is implemented in different sectors, and examines its successes, failures, strengths and weaknesses. Sectors and subjects covered include chemicals, GMOs, marine pollution, fisheries and nature conservation, and the book draws on cases in the EU, in the USA, and Nordic countries, where the use of precaution has

been gathering momentum. Ultimately, the book provides an indispensable appraisal of the question - increasingly important in the era of human-induced climate change - of whether the precautionary principle is relevant, indeed essential, to avert major environmental and health risks, and how and when it can be used successfully.

Published with MARIE CURIE ACTIONS

This overview of the role played by the precautionary principle in international trade law, European law and national law compares how precautionary considerations

have been applied in the fields of pesticide regulation and the regulation of base stations for mobile telephones in Sweden, the UK and the US. A number of problems in the current application of the precautionary principle are identified and discussed. For example, it is shown that a firm reliance on a wide and open-ended precautionary principle may lead to problems with the consistency, foreseeability, effectiveness and efficiency of measures intended to reduce environmental or health risks. It is

suggested that the precautionary principle indeed may be an important tool, but that in order to be acceptable it must be coupled with strong requirements on the performance of risk assessments, cost/benefit analyses and risk trade-off analyses.

The publication aims to familiarize students of public policy with the precautionary principle, which plays a vital role in the European Union's approach toward regulating risks. The precautionary principle contends that

policy makers should refrain from actions having a suspected risk of causing harm to the public and/or the environment.

However, the precautionary principle only provides guidance to policy makers but does not prescribe specific policy responses. Therefore, there should be variation in the way the principle is applied. Furthermore, precautionary measures are, in principle, of a provisional nature, suggesting that they are likely to be subject to changes over time. This book is thus interested in

shedding light on how the precautionary principle is put into practice and to what extent precautionary measures become modified. Empirically, it focuses on how the EU has regulated the use of growth hormones in meat production, the cultivation of genetically modified corn and the use of Stevia-based sweeteners in foods and beverages. The main theoretical argument advanced by this study is that the way in which the original regulatory standards were formulated affects whether and how they are changed. By placing

particular emphasis on the relevance of scientific evidence for the (re-)definition of precautionary measures, the book is expected to appeal to both academics and practitioners.

Comparative Dimensions

The Precautionary Principle in EU Risk Regulation

Implementing The Precautionary Principle

Interpreting the Precautionary Principle

The International Seabed Authority and the Precautionary Principle

An Inconvenient Deliberation

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Papers presented at the meetings facilitated by the Sanders Institute at the Faculty of Law of the Erasmus University Rotterdam and the Law School of the University of Hull.

This study examines how the European Union has used the precautionary principle in legal decisions.

The controversial question of whether or not at present the precautionary principle is to be considered a norm of customary international law is the key theme of this work, which treats the issue as part of a broader discussion of the principle's legal status on the international plane. This discussion, in turn, is put in perspective by an account of the short but remarkable history of the principle in international environmental law and policy. The greater part of this study consists of the mapping and analysis of state practice in respect of the precautionary principle. Pertinent treaties,

declarations, decisions of international organizations and domestic instruments pass in review. The book then applies the generally accepted principles governing the formation of customary international law to this body of state practice. This manuscript was awarded the François Prize 2001 by the Netherlands Society of International Law / Netherlands Branch of the ILA. '[The precautionary principle] has been cited in an increasing number of legal proceedings, including those in the International Court of Justice, The International Tribunal For The Law of the Sea And The WTO Appellate Body, As well as in the courts of a large number of states, including the supreme courts of India and Canada.' (from the Preface by the Series Editors)

This book examines the present state of affairs regarding the implementation of the precautionary principle in the law of the sea

in different sectors, e.g. pollution of the marine environment, conservation and management of living marine resources, and transboundary transports of radioactive and hazardous wastes.

An Issues Paper for Policy-makers, Researchers and Practitioners
Evolution and Status of the Precautionary Principle in International Law
Risk Regulations and Scientific Expertise in the United Kingdom
A Critical Appraisal of Environmental Risk Assessment
Arbitrary and Capricious
The Precautionary Principle - International Law and Climate Change
The Precautionary Principle is seen by environmentalists and public health experts as the key to protecting

ecological and human health. This book describes the scientific and philosophical foundations of the principle of precautionary action. It explains the functions of the principle in activities as diverse as agriculture and manufacturing, how to know when precautionary action is needed and who decides what action will (or will not) be taken.

Scientific progress offers tremendous potential benefits to society but also presents risks. While research focuses on how to manifest the benefits of any new technology, the outside community fears the consequences that technology may inadvertently have on social goods such as the

environment, public health and security. To balance the benefits of the progress of science against the risks associated with its application is one of the major public policy challenges of the 21st century. In this paper, the author argues that the precautionary principle is an extension of the scientific method in the popperian tradition and has precedent in hypothesis testing. Under this framework, we then explore an approach that captures the essence of the weaker precautionary principle but also accounts for the 'unacceptable' outcome through the use of a social standard or threshold of harm. Under this methodology, a social standard is established and

accounted for in the cost-benefit analysis. The existence of the social standard creates an additional cost or benefit to the assessment of a project. The report illustrates the methodology with a discussion of two cases: the 'mad cow' disease and the regulation on carbon emission.

The book examines whether the jurisdiction of coastal States under international law can be extended to include powers of intervention towards vessels posing a significant risk to their coastal and marine environment, but which have not yet been involved in any incident or accident.

The books sets out how it is that coastal State jurisdiction can indeed be seen as including powers of intervention

towards High Risks Vessels before an incident or accident happens, on the basis of the precautionary principle. The precautionary principle requires taking action when a risk of damage to the environment is suspected, but cannot be confirmed scientifically. The book thus considers the potential opportunities for the coastal state under international law to regulate international shipping where they consider vessels to an unacceptable risk to the environment, in order to prevent or minimise the risk of occurrence of the accident or incident leading to damage. The book acknowledges that this puts into question some very old and established principles of the law of the sea,

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most importantly the principle of freedom of navigation. But B é n é dicte Sage-Fuller contends that this change would itself be a consequence of the evolution, since the end of WWII, of on the one hand international law of the sea itself, and of international environmental law on the other hand.

The precautionary principle provides a justification to act where scientific uncertainty about the nature and extent of detected indications of harm would otherwise possibly impede regulatory interventions. The highly controversial and often misunderstood principle plays a central role in European risk regulation. The present volume should

allow readers to gain an overview of all essential points linked with the role of the principle in the risk regulation framework of the European Union. Based on an outline of the precautionary principle ' s main characteristics and its conception by the European Commission, common allegations brought against the principle are illuminated and critically assessed. The second part of the book is then devoted to the actual implementation of the principle in the EU – from early applications to ongoing disputes. Three case studies from the agrochemical, pharmaceutical and food packaging sector reflect current applications as well as the relevant institutional and procedural

framework. Insights from the theoretical part and the case studies are melted in the final discussion section that also includes recommendations for EU risk regulators.

Evolution of the Precautionary Principle

The Precautionary Principle in the European Union
Courts

Late Lessons from Early Warnings

Lessons from the American and European Experience

The Precautionary Principle in Practice

The Precautionary Principle in Biodiversity Conservation
and Natural Resource Management

Animal cloning, nanotechnology, and genetic modifications

are all examples of recent controversies around food regulation where scientific evidence occupies a central position. This book provides a fresh perspective on EU scientific food safety governance by offering a legal insight into risk analysis and the precautionary principle, positioned as general principles of EU food law. To explain what the science-based requirement means in EU multi-level governance, this book places these principles in the legislative dynamics of the EU internal market and the meta-framework of the international trade regime established by the WTO. Numerous examples of the case-law of European Courts show implications of risk analysis and science-based food law for EU and national decision makers, as well as food businesses. This book focuses on the crucial

aspects of the risk analysis methodology. It redefines the precautionary principle and clarifies its scope of application. It analyses the extent to which non-scientific factors, such as consumers' risk perception, local traditions or ethical considerations, can be taken into account at national and EU level. This book argues that, compared to EU institutions, the autonomy allocated to national authorities is much more limited, which raises questions about the legitimacy of food safety governance in the EU.

This book presents and defends an interpretation of the precautionary principle from the perspective of philosophy of science.

Goklany argues that selective application of this principle

distorts the policy debate.

The precautionary principle puts forward the 'commonsense' notion that decision-makers should be cautious when assessing potential health or environmental harms in the absence of the full scientific facts. It is now a well-established tenet of environmental law. The debate has turned to its legal implementation, especially its application 'in practice'. The Precautionary Principle in Practice - Environmental decision-making and scientific uncertainty focuses on these issues. It considers how decision-makers can assess threats to health or the environment when the available scientific evidence is sparse and discusses the types of 'uncertainties' that bring the precautionary principle into play. Peel uses detailed case studies

which examine the implementation of the precautionary principle in actual decision-making scenarios: fisheries management; risk assessment for genetically modified organisms; and environmental impact assessment for development applications. She demonstrates an approach that takes account of variable uncertainty issues and can be adapted to different circumstances to ensure a comprehensive assessment of the potential threats to health or the environment. Jackie Peel has a background in both science and law. She took a BSC/LLB with 1st class honours at the University of Queensland and holds an LLM from New York University where she studied in 1999-2000 as a Fulbright Scholar. She is now is a Senior Lecturer in the Faculty of Law,

University of Melbourne.

The Precautionary Principle and International Law: The
Challenge of Implementation

Bridging the Gap Between Science and Society

Protecting Public Health, the Environment and the Future of
Our Children

Modern Decision Making in International Law

Regulating food law

The Precautionary Principle in Public Policy

A hands-on guide to implementing the precautionary principle
and avoiding harm through foresight and wise decisions.

The book asks: How are scientific developments impacting on
human life and on the structure of societies? How is science

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regulated, and how should it be regulated? Are there ethical boundaries to scientific developments in some sensitive areas? (robotic intelligence, biosecurity?)

Rethinking Risk and the Precautionary Principle challenges the claim that the precautionary principle is an appropriate guide to public policy decision-making in the face of uncertainty. The precautionary principle is frequently invoked as a justification for regulating human activities. From bans on the use of growth hormones in cattle to restrictions on children's playground activities, precautionary thinking seems to be taking over our lives. As the contributors to this book show, such an approach is of dubious utility and may even be counterproductive. This is a timely and important contribution

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to the debate on how to manage risk in the modern world. The editor, Julian Morris, is Director of the Environment and Technology Programme at the Institute of Economic Affairs in London. He has written widely on issues relating to environmental protection and technological development. Up to date discussion of current issues and scientific controversies

Challenges the claim that the 'precautionary principle' is an appropriate guide to public policy decisions

Master's Thesis from the year 2006 in the subject Environmental Sciences, grade: merit, Lund University (LUMES), language: English, abstract: The precautionary principle is an old concept with a new character. Threats of harm, since the early days of civilization, were confronted by

taking some form of precaution. Throughout history, the concept of precaution provided humans with the moral right to avoid potential harm or damage to his health and his environment despite lack of certainty of its occurrence. Today, the precautionary principle is a common legal concept in national and international regulatory policies. In a nutshell, it means that if there is threat or risk of serious or irreversible damage to human health or the environment, precautionary actions must be taken even though there is lack of full certainty surrounding the issue. This paper looks at the concept of precaution in the framework of international law. The precautionary principle is particularly applied in the current global effort to address climate change. Despite many

uncertainties about the science and impacts of the global warming phenomenon, leaders of the global community, adopted the precautionary principle, instead of the traditional reactive wait-and-see approach, in the climate regime. Although criticized by many for its shortcomings and its marginal position in the practical sense, this paper looks at the legal validity of the precautionary principle based on its sources, rather than its merits. In other words, this thesis looks at the concept of precaution and examines it in the lens of the contemporary international legal system. The first part of this thesis endeavours to understand better the precautionary principle under international conventional law. Influenced by systems approach, this paper particularly analyzed the

principle ' s relevance with the climate change issue. Guided by the legal positivist approach, the first part argues that the precautionary principle is a significant doctrine in international conventional law. The thesis also examines the precautionary principle in the context of international customary law.

Keywords: precautionary principle, climate change, treaties, uncertainty, customary international law

Environmental Decision-making and Scientific Uncertainty

The Application of the Precautionary Principle in Practice

Perspectives and Prospects

The Precautionary Principle in the 20th Century

CEPA and the Precautionary Principle/ approach

The Perils of the Precautionary Principle

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Presents recent breakthroughs in the theory, methods, and applications of safety and risk analysis for safety engineers, risk analysts, and policy makers. Safety principles are paramount to addressing structured handling of safety concerns in all technological systems. This handbook captures and discusses the multitude of safety principles in a practical and applicable manner. It is organized by five overarching categories of safety principles: Safety Reserves; Information and Control; Demonstrability; Optimization; and Organizational Principles and Practices. With a focus on the structured treatment of a large number of safety principles relevant to all related fields, each chapter defines the principle in question and discusses its application as well as how it relates to other principles and

terms. This treatment includes the history, the underlying theory, and the limitations and criticism of the principle. Several chapters also problematize and critically discuss the very concept of a safety principle. The book treats issues such as: What are safety principles and what roles do they have? What kinds of safety principles are there? When, if ever, should rules and principles be disobeyed? How do safety principles relate to the law; what is the status of principles in different domains? The book also features:

- Insights from leading international experts on safety and reliability
- Real-world applications and case studies including systems usability, verification and validation, human reliability, and safety barriers
- Different taxonomies for how safety principles are

categorized • Breakthroughs in safety and risk science that can significantly change, improve, and inform important practical decisions • A structured treatment of safety principles relevant to numerous disciplines and application areas in industry and other sectors of society •

Comprehensive and practical coverage of the multitude of safety principles including maintenance optimization, substitution, safety automation, risk communication, precautionary approaches, non-quantitative safety analysis, safety culture, and many others The Handbook of Safety Principles is an ideal reference and resource for professionals engaged in risk and safety analysis and research. This book is also appropriate as a graduate and PhD-level textbook for

courses in risk and safety analysis, reliability, safety engineering, and risk management offered within mathematics, operations research, and engineering departments. NIKLAS MÖLLER, PhD, is Associate Professor at the Royal Institute of Technology in Sweden. The author of approximately 20 international journal articles, Dr. M ö ller's research interests include the philosophy of risk, metaethics, philosophy of science, and epistemology. SVEN OVE HANSSON, PhD, is Professor of Philosophy at the Royal Institute of Technology. He has authored over 300 articles in international journals and is a member of the Royal Swedish Academy of Engineering Sciences. Dr. Hansson is also a Topical Editor for the Wiley Encyclopedia of Operations

Research and Management Science. JAN-ERIK HOLMBERG, PhD, is Senior Consultant at Risk Pilot AB and Adjunct Professor of Probabilistic Risk and Safety Analysis at the Royal Institute of Technology. Dr. Holmberg received his PhD in Applied Mathematics from Helsinki University of Technology in 1997. CARL ROLLENHAGEN, PhD, is Adjunct Professor of Risk and Safety at the Royal Institute of Technology. Dr. Rollenhagen has performed extensive research in the field of human factors and MTO (Man, Technology, and Organization) with a specific emphasis on safety culture and climate, event investigation methods, and organizational safety assessment.

Handbook of Safety Principles

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The Precautionary Principle's Contribution to the
Uncertainties Surrounding Climate Change Liability
Balancing Deep Seabed Mineral Mining and Marine
Environmental Protection
With Special Reference to High Risk Vessels
The Precautionary Principle in International Law
"Risk, Uncertainty and Practice in Conservation and
Sustainable Use".