

The Dilemma Of Siting A High Level Nuclear Waste Repository (Studies In Risk And Uncertainty)

Firmly places impact assessment in the broader context of environmental planning, developing a much-needed integrative approach. The topics covered include: decision making and dispute resolution; the role of environmental law; public policy, administration and publication participation; the nature of planning; impact assessment methodology; the application of impact assessment to frontier developments; linear facilities and waste mana

In this wholly revised second edition, Michael Edelstein draws or iis thifty years as a community activist to provide a much-expanded theoretical foundation for understanding the psychosocial impacts of toxic contamination. Informed by social psychological theory and an extensive survey of documented cases of toxic exposure, and enlivened by excerpts drawn from more than one thousand Interviews with victims, Contaminated Communities, Second Edition, presents, a candid portrayal of the toxic victim's experience and the key stages in the course of toxic disaster. The second edition introduces dozens of new cases and provides expanded considerations of environmental justice, environmental racism, environmental turbulence, and environmental stigma, as well as a fully articulated theory of "livescape." The new edition moves past the well-charted role of reactive environmentalism to explore issues for a proactivist approach that employs a "third path" of social learning, sustainable innovation, consensus building, and community empowerment.

Democratic government is about making choices. Sometimes those choices involve the distribution of benefits. At other times they involve the imposition of some type of loss—a program cut, increased taxes, or new regulatory standards. Citizens will resist such impositions if they can, or will try to punish governments at election time. The dynamics of loss imposition are therefore a universal—if unpleasant—element of democratic governance. The Government Taketh Away examines the repercussions of unpopular government decisions in Canada and the United States, the two great democratic nations of North America. Pal, Weaver, and their contributors compare the capacities of the U.S. presidential system and the Canadian Westminster system to impose different types of losses: symbolic losses (gun control and abortion), geographically concentrated losses (military base closings and nuclear waste disposal), geographically dispersed losses (cuts to pensions and to health care), and losses imposed on business (telecommunications deregulation and tobacco control). Theory holds that Westminster-style systems should, all things being equal, have a comparative advantage in loss imposition because they concentrate power and authority, though this can make it easier to pin blame on politicians too. The empirical findings of the cases in this book paint a more complex picture. Westminster systems do appear to have some robust abilities to impose losses, and US institutions provide more opportunities for loss-avoiders to resist government policy in some sectors. But in most sectors, outcomes in the two countries are strikingly similar. The Government Taketh Away is essential for the scholar and students of public policy or comparative policy. It is also an important book for the average citizen who wants to know more about the complexities of living in a democratic society where the government can give-but how it can also, sometimes painfully, "taketh away."

We live in a 'risk society' where the identification, distribution and management of risks, from new technology, environmental factors or other sources are crucial to our individual and social existence. In The Social Contours of Risk, Volumes I and II, two of the world's leading and most influential analysts of the social dimensions of risk bring together their most important contributions to this fundamental and wide-ranging field. Volume I collects their fundamental work on how risks are communicated among different publics and stakeholders, including local communities, corporations and the larger society. It analyses the problems of lack of transparency and trust, and explores how even minor effects can be amplified and distorted through media and social responses, preventing effective management. The final section investigates the difficult ethical issues raised by the unequal distribution of risk depending on factors such as wealth, location and genetic inheritance - with examples from worker and public protection, facility-siting conflicts, transporting hazardous waste and widespread impacts such as climate change. Volume II centres on the analysis and management of risk in society, in international business and multinationals, and globally. The 'acceptability' of risk to an individual depends on the context, whether the larger society or in, for example, a corporate framework. Their work clarifies the structures and processes for managing risks in the private sector and the factors that produce or impede effective decisions. The authors demonstrate that corporate culture is crucial in determining risk management. They analyse the transfer of corporate risk management systems from industrial to developing countries, and how globalization is spreading and creating new kinds of risk - the combination of traditional and modern hazards presented by climate change, technology transfer and economic growth. They describe the new priorities and capacities needed to deal with these enhanced vulnerabilities around the globe.

Whose Backyard, Whose Risk

Problems and Policies

Proceedings of the International Topical Meeting

U.S. Law and Policy on Nuclear Waste

Towards a New Social Science Paradigm

California's 20-year Power Plant Siting Plan

The Social Amplification of Risk

Modern technological systems entail risks and uncertainties of hitherto unknown dimensions. This book discusses the construction of risk and safety within a variety of empirical contexts where technologies and their risk are debated and handled by individuals, groups or organizations. With contributions from leading scholars from Europe and the USA, it presents original theoretical discussions, linked to detailed empirical case studies.

This handbook offers a comprehensive transdisciplinary examination of the research and practices that constitute the emerging research agenda in energy democracy. With protests over fossil fuels and controversies over nuclear and renewable energy technologies, democratic ideals have contributed to an emerging social movement. Energy democracy captures this movement and addresses the issues of energy access, ownership, and participation at a time when there are expanding social, political, environmental, and economic demands on energy systems. This volume defines energy democracy as both a social movement and an academic area of study and examines it through a social science and humanities lens, explaining key concepts and reflecting state-of-the-art research. The collection is comprised of six parts: 1 Scalar Dimensions of Power and Governance in Energy Democracy 2 Discourses of Energy Democracy 3 Grassroots and Critical Modes of Action 4 Democratic and Participatory Principles 5 Energy Resource Tensions 6 Energy Democracies in Practice The vision of this handbook is explicitly transdisciplinary and global, including contributions from interdisciplinary international scholars and practitioners. The Routledge Handbook of Energy Democracy will be the premier source for all students and researchers interested in the field of energy, including policy, politics, transitions, access, justice, and public participation.

Experts from academia and government who are actively engaged in research in the area of risk communication present a compendium of cases that give information and allow the development of strategies to improve the communication of scientific information to the public. The cases span Western, Central and Eastern Europe, covering such areas as nuclear waste, heavy metal contamination, landfill siting, risk perception, global warming, international health for all, and more. The conclusions and recommendations presented here are being used to develop future activities to further explore this area of risk communication as an international study. Audience: Scientists, risk communicators, psychologists, toxicologists, health professionals, and anyone who has an interest in public communication on scientific uncertainty.

In Whose Backyard, Whose Risk, environmental lawyer, professor, and commentator Michael B. Gerrard tackles the thorny issue of how and where to dispose of hazardous and radioactive waste. In Whose Backyard, Whose Risk, environmental lawyer, professor, and commentator Michael B. Gerrard tackles the thorny issue of how and where to dispose of hazardous and radioactive waste. Gerrard, who has represented dozens of municipalities and community groups that have fought landfills and incinerators, as well as companies seeking permits, clearly and succinctly analyzes a problem that has generated a tremendous amount of political conflict, emotional anguish, and transaction costs. He proposes a new system of waste disposal that involves local control, state responsibility, and national allocation to deal comprehensively with multiple waste streams. Gerrard draws on the literature of law, economics, political science, and other disciplines to analyze the domestic and international origins of wastes and their disposal patterns. Based on a study of the many failures and few successes of past siting efforts, he identifies the mistaken assumptions and policy blunders that have helped doom siting efforts. Gerrard first describes the different kinds of nonradioactive and radioactive wastes and how each is generated and disposed of. He explains historical and current siting decisions and considers the effects of the current mechanisms for making those decisions (including the hidden economics and psychology of the siting process). A typology of permit rules reveals the divergence between what underlies most siting disputes and what environmental laws actually protect. Gerrard then looks at proposals for dealing with the siting dilemma and examines the successes and failures of each. He outlines a new alternative for facility siting that combines a political soluton and a legal framework for implementation. A hypothetical example of how a siting decision might be made in a particular case is presented in an epilogue.

Risk Management Strategies Applied To Environmental Cleanup In Central And Eastern Europe - Proceedings Of The International School Of Innovative Technologies For Cleaning The Environment

Nuclear Waste Politics

The Siting Dilemma

Building Sustainable Communities

Transmission Line Reliability and Security

The Government Taketh Away

Fuel Cycle to Nowhere

This book examines major policy and planning issues in development studies from the regional science perspective. It investigates questions such as: “How are communities able to deal with uncertainties raised by conflicts, technology, and external shocks in the process of development?”; “How can nations achieve sustainable development in terms of resource allocation and management?”; and “How can developing countries improve their economic competitiveness while maintaining the objectives of equitable and coordinated growth among different regions?” using case studies that focus on different subfields, like infrastructure, environment, data science, sustainability and resilience. **The book is organized in three parts. Part I clarifies fundamental issues regarding development studies and regional science in general, while Part II includes several case studies that address development-related opportunities and challenges with a focus on Asian countries. Lastly, Part III offers a global perspective and explores development experiences from countries throughout the world. Featuring contributions by leading academics and practitioners working at various organizations linked to international development, and including multidisciplinary analyses, the book appeals to students who are interested in development studies and regional science. It also offers planners and policymakers fresh insights into regional economic development.**

The Dilemma of Siting a High-Level Nuclear Waste RepositorySpringer Science & Business Media

A path-breaking analysis of the relationship between economic institutions and values.

Based on the most comprehensive, multi-site, and multi-dimensional study completed to date on waste-facility siting and management in rural areas in the U.S., Hazardous Wastes in Rural America establishes the impacts of waste facilities for a range of rural communities that have experienced alternative stages of waste-facility siting and operation process.

Energy Dilemma

The Continuing Societal and Technical Challenges

Economics as a Science of Human Behaviour

Risk, Media and Stigma

Routledge Handbook of Energy Democracy

Essays in Honor of Kingsley E. Haynes

The Social Contours of Risk

Aimed at scientists and non-specialised readers alike, this book retraces the source of national and international biotechnology programmes by examining the origins of biotechnology and its political and economic interpretation by large nations. With a foreword by André Goffeau, who initiated the European Yeast Genome Project, the book describes the achievements of the first genetic and physical maps, as well as the political and scientific genesis of the American Human Genome Project. Following these advances, the author discusses the European biotechnology strategy, the birth and implementation of European biotechnology programmes and the yeast genome project. After a detailed description of scientific policy and administrative, technical and scientific achievements, the principal stages of the yeast project and its major benefits are discussed. This enables the reader to obtain a panoramic view of this developing discipline at the dawn of the twenty-first century, as well as a better knowledge of the means deployed at international level. The conclusion gives a very detailed account of the genesis and early stages of this new scientific and technological field called genomics which appears to be a key component of modern industry. By using an epistemological analysis, the conclusion poses the problem of a new representation of life and critically appraises the limitations and deficiencies.

Dilemmas and Decisions distinguishes “problems”, which have rational solutions, from “dilemmas” which do not, aiming to prepare students for decisions required at work, rather than in TV quizzes. It argues that constantly seeking the “right answer” merely leads to extremism and totalitarian thinking.

Time is both the ally of high-level nuclear waste (HLNW) managers and the enemy. It is the ally because the radioactivity in elements and isotopes decreases with age, making the waste progressively less dangerous to human health and safety and the environment. This rate of radioactive decline varies, in some cases diminishing by half (the half life) in seconds, minutes, hours, days, weeks, months, or years. In other cases the decay process takes centuries or hundreds of thousands of years before the wastes are safe for human contact. The problem as now conceptualized for HLNW managers is simple to state if not easy to achieve. The HLNW needs to be secured in some fashion until it decays, by virtue of its physical nature, to safe levels. Another possible future solution, not currently available, might be to change the ~~ructure of HLNW through high-technology processing and thus decompose the waste into units with different and less lengthy radioactivity. Learning whether this processing is a future option will require patience and generous amounts of time for research.

This book explores siting dilemmas - situations in which an "authority" (e.g., Congress, a consortium of utilities) deems it in the best interest of society to build a facility such as an incinerator, but opponents living near the proposed site thwart the plan. Facility developers typically attribute local opposition to selfishness or radically inaccurate views of the risks posed by the facility. We examine the validity of these conclusions by looking in depth at the psychological response that arises when residents are faced with the prospect of living near waste disposal facilities. The particular siting dilemma considered in this book is the problem of how to "dispose" of the high-level nuclear wastes accumulating at nuclear power plants in the United States. These wastes, in the form of "spent" fuel rods, will emit dangerous levels of radioactivity for thousands of years - anywhere between 10,000 and 100,000 years, depending on the margin of safety one adopts. The current proposal is to encase the spent fuel in corrosion-resistant canisters and then to bury these canisters deep underground in a geologic repository. The two of us became involved with the high-level waste issue in 1986 as part of an interdisciplinary research team hired by the State of Nevada. The charge of this team was to estimate the socioeconomic impacts that would accompany a repository if it were built at Yucca Mountain, approximately 100 miles northwest of Las Vegas.

Understanding Public Challenges to Modern Science and Technology

The Low-level Radioactive Waste Siting Dilemma

Impacts, Implications, and Options for Rural Communities

Contaminated Communities

The Moral Dimensions of Six Emerging Conditions in Contemporary Urbanism

Fairness and Competence in Citizen Participation

Coping With Residential Toxic Exposure, Second Edition

First Published in 2005. Routledge is an imprint of Taylor & Francis, an informa company.

Increasingly, we live in an environment of our own making: a "world as design" over the natural world. For more than half of the global population, this environment is also thoroughly urban. But what does a global urban condition mean for the human condition? How does the design of the city and the urban process, in response to the issues and challenges of the Anthropocene, produce new ethical categories, shape new moral identities and relations, and bring about consequences that are also morally significant? In other words, how does the urban shape the ethical—and in what ways? Conversely, how can ethics reveal relations and realities of the urban that often go unnoticed? This book marks the first systematic study of the city through the ethical perspective in the context of the Anthropocene. Six emergent urban conditions are examined, namely, precarity, propinquity, conflict, serendipity, fear and the urban commons.

The long-term governance of radioactive waste continues to be a major complex and unresolved socio-technical issue. Previous technocratic approaches have so far failed. This empirically based study provides a novel approach to complementing technical expertise and economic/political power with stakeholder involvement. Inclusive participation is shown to be an asset that strengthens the processes, enhances robustness and facilitates sustainable decision making, thus adding value for all involved.

For twenty-five years, the Yucca Mountain repository in Nevada was designated as the sole destination for disposal of the nation's accumulated stockpiles of highly radioactive nuclear power and weapons wastes. Now the Obama administration has abandoned Yucca, and Congress must pass new laws to solve the resulting disposal crisis. Even as the federal government seeks to expand nuclear power, local communities and states are demanding a credible program for disposal of the wastes that we already have. The Blue Ribbon Commission on America's Nuclear Future, appointed by the Obama administration to develop a plan, is currently conducting hearings. The first comprehensive history and overview of U.S. nuclear waste law and regulation, Fuel Cycle to Nowhere traces sixty years of nuclear weapons programs, the growth of nuclear power, and their waste legacies, the rise of environmentalism, and the responses of federal agencies. Richard and Jane Stewart expertly analyze the changing policies for storing low-level waste, transuranic waste, spent nuclear fuel, and high-level waste and for regulating their transport by rail and by truck. They also chronicle "a tale of two repositories"—one, the Waste Isolation Pilot Plant in New Mexico, known as WIPP, the world's only operating deep geologic nuclear waste disposal facility, which emerged from a contentious but ultimately successful struggle between federal and state interests; the other, Yucca Mountain, mandated top down by Congress and a failure. Fuel Cycle to Nowhere provides the critical information and analysis on the waste disposal issues and solutions that the commission, Congress, the administration, journalists, policymakers, and the public so urgently need. This book is a project of the Consortium for Risk Evaluation with Stakeholder Participation (CRESP), a Vanderbilt University-led, multi-university consortium supported as a cooperative agreement by the U.S. Department of Energy, Office of Environmental This book is a project of the Consortium for Risk Evaluation with Stakeholder Participation (CRISP), a Vanderbilt University-led, multi-university consortium supported as a cooperative agreement by the U.S. Department of Energy, Office of Environmental Management to support safe, effective, publicly credible, risk informed management of existing and future nuclear waste from government and civilian sources through independent strategic analysis, review, applied research and education.

Dilemmas and Decisions

Social Contours of Risk

High Level Radioactive Waste Management

Water Spectrum

Volume I: Publics, Risk Communication and the Social

The Oxford Handbook of Mutual, Co-Operative, and Co-Owned Business

During the next several years, decisions are expected to be made in several countries on the further development and implementation of the geological disposition option. The Board on Radioactive Waste Management (BRWM) of the U.S. National Academies believes that informed and reasoned discussion of relevant scientific, engineering and social issues can-and should-play a constructive role in the decision process by providing information to decision makers on relevant technical and policy issues. A BRWM-initiated project including a workshop at Irvine, California on November 4-5, 1999, and subsequent National Academies' report to be published in spring, 2000, are intended to provide such information to national policy makers both in the U.S. and abroad. To inform national policies, it is essential that experts from the physical, geological, and engineering sciences, and experts from the policy and social science communities work together. Some national programs have involved social science and policy experts from the beginning, while other programs have only recently recognized the importance of this collaboration. An important goal of the November workshop is to facilitate dialogue between these communities, as well as to encourage the sharing of experiences from many national programs. The workshop steering committee has prepared this discussion for participants at the workshop. It should elicit critical comments and help identify topics requiring in-depth discussion at the workshop. It is not intended as a statement of findings, conclusions, or recommendations. It is rather intended as a vehicle for stimulating dialogue among the workshop participants. Out of that dialogue will emerge the findings, conclusions, and recommendations of the National Academies' report.

Some Major Developments Witnessed During The 20Th Century Have Greatly Impacted Human Beings As Well As The Planet Earth The Only Known Planet To Support Life. Incalculable Harm Is Being Caused To Natural Habitats, Eco-Systems And Environment By Unprecedented Growth In Population Resulting In Great Rise In Consumption; Rapid Increase In Urbanization And Industrialisation; Dramatic Changes In Global Economic Environment; And Reckless Use Of Mineral And Forest Resources, Etc.As A Result Of Man S Unsustainable Practices, There Is An Ongoing Depletion Of Our Planet S Biological Treasures, And A Real Threat Of Acceleration In Greenhouse Effect And Global Warming. Serious Consequences Are Apprehended Because Of Receding Of Glaciers. Rapid Melting Of Snow Will Lead To Quick Run Off Of Water And Submersion Of Coastal Areas And Several Small Islands. Weakening Of The Great Reservoirs Of Water And The Sources Of Rivers Will Adversely Affect The Volume And Flow Of Water. Adverse Climate Changes Anticipated Include Intensification Of Tropical Cyclones, Irregular Rainfall Patterns, Frequent Droughts And Floods.Global Environment: Problems And Policies Is An Anthology Containing Articles By Erudite Scholars And Environmentalists Who Have Analysed The Above Issues And Made Valuable Suggestions On Pertinent Aspects Like Planning And Designing Of Hydrological Structures, River Basin Management, Flood Control, Drought Management, Urban Planning, Industrial Development And Disposal Of Toxic Chemical Wastes.The Book Will Be Highly Useful For Students And Researchers Working In The Field Of Environment. Policymakers, Executives And Industrialists Will Also Find It Useful. The Book Will Create Awareness Among The Readers About The Need To Adopt Sustainable Practices, Protect Natural Habitats, Preserve Biodiversity And Re-Establish Environmental Ethics And Values.

This book discusses the problems of reliability caused by the deregulation of electric utilities and those of security created by the events of September 11. Author Anthony Pansini, a licensed professional engineer and Life Fellow of IEEE, suggests solutions, related to the design, construction, maintenance, and operation of transmission facilities, for maintaining and improving the reliability of deregulated transmission systems, and covers the National Transmission Grid Study in depth. He includes coverage of phenomena occurring in electric theory, in non- or semi-technical terms, for the benefit of the non-engineer.

The benefits of modern technology often involve health, safety and environmental risks that produce public suspicion of technologies and aversion to certain products and substances. Amplified by the pervasive power of the media, public concern about health and ecological risks can have enormous economic and social impacts, such as the 'stigmatization' experienced in recent years with nuclear power, British beef and genetically modified plants. This volume presents the most current and comprehensive examination of how and why stigma occurs and what the appropriate responses to it should be to inform the public and reduce undesirable impacts. Each form of stigma is thoroughly explored through a range of case studies. Theoretical contributions look at the roles played by government and business, and the crucial impact of the media in forming public attitudes. Stigma is not always misplaced, and the authors discuss the challenges involved in managing risk and reducing the vulnerability of important products, industries and institutions while providing the public with the relevant information they need about risks.

A Process for Improving Public Acceptance

Fear and Fairness in Toxic and Nuclear Waste Siting

One Hundred Centuries Of Solitude

Hazardous Wastes in Rural America

A Dilemma for Municipalities and Economic Development Regions

Development Studies in Regional Science

Economics, Values, and Organization

The activities of the Fondazione ENI Enrico Mattei cover a broad spectrum of research topics, ranging from economics to engineering, from environmen tal management at the industry or regional level to basic mathematical model ling research. It is the combination of the activities on these last two topics that led the Fondazione to organise, with the University of Geneva, a work shop where operation research tools were designed with the aim to provide national and local policy makers with appropriate analytical and policy instru ments for environmental management. In the recent past, attention has often been devoted to global environmen tal issues in which the level of policy making is either international, through multi-country agreements on emission control, or national, when environ mental policies are designed to control domestic pollution. Many environ mental problems, however, have a local or regional dimension. Even when their dimension is global, e. g. in the case of the greenhouse gas effect, relevant decisions on emission control, such as the adoption of energy saving utilities, are taken at the local level. In many countries, the current legislation imposes the local authorities to prepare plans and adopt measures to control energy consumption or to reduce waste of natural resources. It is therefore important to analyze the way in which local or regional authorities optimise their environmental management.

Ortwin Renn Thomas Wehler Peter Wiedemann In late July of 1992 the small and remote mountain resort of Morschach in the Swiss Alps became a lively place of discussion, debate, and discourse. Over a three-day period twenty-two analysts and practitioners of public participation from the United States and Europe came together to address one of the most pressing issues in contemporary environmental politics: How can environmental policies be designed in a way that achieves both effective protection of nature and an adequate representation of public values? In other words, how can we make the environmental decision process competent and fair? All the invited scholars from academia, international research institutes, and governmental agencies agreed on one fundamental principle: For environmental policies to be effective and legitimate, we need to involve the people who are or will be affected by the outcomes of these policies. There is no technocratic solution to this problem. Without public involvement, environmental policies are doomed to fail. The workshop was preceded by a joint effort by the three editors to develop a framework for evaluating different models of public participation in the environmental policy arena. During a preliminary review of the literature we made four major observations. These came to serve as the primary motivation for this book. First, the last decade has witnessed only a fair amount of interest within the sociological or political science communities in issues of public participation.

This volume brings together case studies and theoretical work informed by the social amplification of risk framework.

In this inter-disciplinary follow-up to Future as Fairness: Ecological Justice and Global Citizenship (edited by Haugestad and Wulforst, Rodopi 2004) 14 chapters explore a variety of conceptual and practical pathways to the building of sustainable communities. Five chapters provide different perspectives on sustainable and unsustainable agriculture. Other cases explored are wildlife valuations, distributional effects of environmental policy, the emerging American nuclear power renaissance, regulation of care use, job losses with a raising GDP, cooperation between labour and environmentalists, plant biotechnology, participatory decision making, acoustic ecology, decent competition, and fractality as a key to global citizenship and ecological justice. The introduction sketches a framework for constructive evaluation of the interrelationships between environmental sustainability, economic sustainability, communities, and social interactions.

Impact Assessment and Sustainable Resource Management

Long-Term Institutional Management of U.S. Department of Energy Legacy Waste Sites

Environmental Justice & Global Citizenship

Scientific Uncertainty and Its Influence on the Public Communication Process

Urban Ethics in the Anthropocene

Robustness from Lessons Learned in Long-Term Radioactive Waste Governance

The Debate Over Landfill Siting

The Oxford Handbook of Mutuals and Co-Owned Business investigates all types of 'member owned' organizations, whether consumer co-operatives, agricultural and producer co-operatives, worker co-operatives, mutual building societies, friendly societies, credit unions, solidarity organizations, mutual insurance companies, or employee-owned companies. Such organizations can be owned by their consumers, the producers, or the employees - whether through single-stakeholder or multi-stakeholder ownership. This complex set of organizations is named differently across countries: from 'mutual' in the UK, to 'solidarity cooperatives' in Latin America. In some countries, such organizations are not even officially recognized and thus lack a specific denomination. For the sake of clarity, this Handbook will refer to member-owned organizations to encompass the variety of non-investor-owned organizations, and in the national case study chapters the terms used will be those most widely employed in that country. These alternative corporate forms have emerged in a variety of economic sectors in almost all advanced economies since the time of the industrial revolution and the development of capitalism, through the subsequent creation and dominance of the limited liability company. Until recently, these organizations were generally regarded as a rather marginal component of the economy. However, over the past few years, member-owned organizations have come to be seen in some countries, at least, as potentially attractive in light of their ability to tackle various economic and social concerns, and their relative resilience during the financial and economic crises of 2007-2013.

It is now becoming clear that relatively few U.S. Department of Energy (DOE) waste sites will be cleaned up to the point where they can be released for unrestricted use. "Long-term stewardship" (activities to protect human health and the environment from hazards that may remain at its sites after cessation of remediation) will be required for over 100 of the 144 waste sites under DOE control (U.S. Department of Energy, 1999). After stabilizing wastes that remain on site and containing them as well as is feasible, DOE intends to rely on stewardship for as long as hazards persist-in many cases, indefinitely. Physical containment barriers, the management systems upon which their long-term reliability depends, and institutional controls intended to prevent exposure of people and the environment to the remaining site hazards, will have to be maintained at some DOE sites for an indefinite period of time. The Committee on Remediation of Buried and Tank Wastes finds that much regarding DOE's intended reliance on long-term stewardship is at this point problematic. The details of long-term stewardship planning are yet to be specified, the adequacy of funding is not assured, and there is no convincing evidence that institutional controls and other stewardship measures are reliable over the long term. Scientific understanding of the factors that govern the long-term behavior of residual contaminants in the environment is not adequate. Yet, the likelihood that institutional management measures will fail at some point is relatively high, underscoring the need to assure that decisions made in the near term are based on the best available science. Improving institutional capabilities can be expected to be every bit as difficult as improving scientific and technical ones, but without improved understanding of why and how institutions succeed and fail, the follow-through necessary to assure that long-term stewardship remains effective cannot reliably be counted on to occur. Long-Term Institutional Management of U.S. Department of Energy Legacy Waste Sites examines the capabilities and limitations of the scientific, technical, and human and institutional systems that compose the measures that DOE expects to put into place at potentially hazardous, residually contaminated sites.

The question of what to do with radioactive waste has dogged political administrations of nuclear-powered electricity-producing nations since the inception of the technology in the 1950s. As the issue rises to the forefront of current energy and environmental policy debates, a critical policy analysis of radioactive waste management in the UK provides important insights for the future. Nuclear Waste Politics sets out a detailed historical and social scientific analysis of radioactive waste management and disposal in the UK from the 1950s up to the present day; drawing international comparisons with Sweden, Finland, Canada and the US. A theoretical framework is presented for analysing nuclear politics: blending literatures on technology policy, environmental ethics and the geography and politics of scale. The book proffers a new theory of "ethical incrementalism" and practical policy suggestions to facilitate a fair and efficient siting process for radioactive waste management facilities. The book argues that a move away from centralised, high capital investment national siting towards a regional approach using deep borehole disposal, could resolve many of the problems that the high stakes, inflexible "megaproject" approach has caused across the world. This book is an important resource for academics and researchers in the areas of environmental management, energy policy, and science and technology studies.

Focused attention by world leaders is needed to address the substantial challenges posed by disposal of spent nuclear fuel from reactors and high-level radioactive waste from processing such fuel. The biggest challenges in achieving safe and secure storage and permanent waste disposal are societal, although technical challenges remain. Disposition of radioactive wastes in a deep geological repository is a sound approach as long as it progresses through a stepwise decision-making process that takes advantage of technical advances, public participation, and international cooperation. Written for concerned citizens as well as policymakers, this book was sponsored by the U.S. Department of Energy, U.S. Nuclear Regulatory Commission, and waste management organizations in eight other countries.

Disposition of High-Level Radioactive Waste Through Geological Isolation

An Incrementalist Perspective

Global Environment

Operations Research and Environmental Management

A Critical Addition to the Curriculum

Radioactive Waste Management

The Dilemma of Siting a High-Level Nuclear Waste Repository

This book champions the view that economics is a social science, and that, moreover, it may serve as a new paradigm for the social sciences. Economics is taken to be part of those sciences which deal with actual problems of society by providing insights, improving our understanding and suggesting solutions. I am aware that the way problems are addressed here has little in common with economics as it is generally understood today; most economists make strong efforts to imitate the exact sciences. Economics tends to become a branch of applied mathematics; the majority of all publications in professional journals and books are full of axioms, lemmas and proofs, and they are much concerned with purely formal deductions. Often, when the results are translated into verbal language, or when they are applied empirically, disappointingly little of interest remains. The book wants to show that another type of economics exists which is surprisingly little known. This type of economics has its own particular point of view. It centres on a concept of man, or a model of human behaviour, which differs from those normally used in other social sciences such as sociology, political science, law, or psychology. I do not, however, claim that economics is the only legitimate social science. On the contrary, economics can provide useful insights only in collaboration with the other social VII VIII PREFACE sciences-an aspect which has been disregarded by mathematically oriented economics.

Development, Current Status, and Technical and Policy Challenges

Disposition of High-Level Waste and Spent Nuclear Fuel

Redirecting America's High-level Nuclear Waste Policies

Low-level Radioactive Waste Disposal in the United States

Decision Making for Complex Socio-Technical Systems

Evaluating Models for Environmental Discourse

Constructing Risk and Safety in Technological Practice