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Contents: (1) Intro.; (2) What are Rare Earth Elements (REE)?; (3) Major End Uses and Applications: Demand for REE: The Application of REE in National Defense; (4) Rare Earth Resources and Production Potential: Supply Chain Issues; Role of China; (5) Rare Earth Legislation in the 111th Congress: H.R. 4866, and S. 3521, the Rare Earths Supply-Chain Technology and Resources Transformation Act of 2010: H.R. 5136, the FY 2011 Nat. Defense Authorization Act; P.L. 111-84, the FY 2010 Nat. Defense Authorization Act; (6) Possible Policy Options: Authorize and Appropriate Funding for a USGS Assessment: Support and Encourage Greater Exploration for REE; Challenge China on Its Export Policy; Establish a Stockpile. Illustrations.

"It is worse, much worse, than you think. If your anxiety about global warming is dominated by fears of sea-level rise, you are barely scratching the surface of what terrors are possible. In California, wildfires now rage year-round, destroying thousands of homes. Across the US, "500-year" storms pummel communities month after month, and floods displace tens of millions annually. This is only a preview of the changes to come. And they are coming fast. Without a revolution in how billions of humans conduct their lives, parts of the Earth could become close to uninhabitable, and other parts horrifically inhospitable, as soon as the end of this century. In his travelogue of our near future, David Wallace-Wells brings into stark relief the climate troubles that await -- food shortages, refugee emergencies, and other crises that will reshape the globe. But the world will be remade by warming in more profound ways as well, transforming our politics, our culture, our relationship to technology, and our sense of history. It will be all-encompassing, shaping and distorting nearly every aspect of human life as it is lived today. Like An Inconvenient Truth and Silent Spring before it, The Uninhabitable Earth is both a meditation on the devastation we have brought upon ourselves and an impassioned call to action. For just as the world was brought to the brink of catastrophe within the span of a lifetime, the responsibility to avoid it now belongs to a single generation"--

Wetlands could be described as land and water at Tropical wetlands: one and the same time, and as such are very specific on the brink ecosystems. Their often rich variety of resources makes them highly valuable to the peoples who live With a few exceptions (like the Everglades in the or regularly stay in them. However, access to them United States), the last remaining large wetlands are to be found in developing countries. Perhaps this can be difficult and those unaware of their services be explained by insufficient financial resources, frequently associate wetlands with such nuisances and calamities as mosquitos, disease, floods, impen lower population density or a different concept of etrable wastelands, etc. As a result these areas are development and well-being. Whatever the reasons, often perceived as obstacles to human development many tropical wetlands still exist and support the and well-being. subsistence of many communities. But for how much History reflects these two views. Wetlands may longer? have been the cradle of great civilizations (like the During the last few decades tropical wetlands Maya, Inca, Aztec, Nilotic and Mesopotamian have also been destroyed or considerably altered. Dams and embankments now prevent water from civilizations), but elsewhere their destruction allowed other societies to develop. For example the Nether spreading into the floodplains of several rivers, like lands literally 'emerged from the waters' thanks to the Senegal, Volta and Nile.

"The fourth sector" is a relatively new sector that consists of for-benefit organizations that combine market-based approaches of the private sector with the social and environmental aims of the public and non-profit sectors. This book examines trends of entrepreneurship in the fourth sector, describes specific ecosystems fostering new ventures around the world, and characterizes the most common and innovative business models. It covers as well the main effects, among others, of technological change, innovation, and institutional behavior on the sector in the last years.

Western Electrician

Externalities of Power Generation in Australia

Tropical Freshwater Wetlands

Rare Earth Elements

Climate Change 2014

Electronic Waste Management and Treatment Technology

Synthesis Report

E-waste management is a serious challenge across developed, transition, and developing countries because of the consumer society and the globalization process. E-waste is a fast-growing waste stream which needs more attention of international organizations, governments, and local authorities in order to improve the current waste management practices. The book reveals the pollution side of this waste stream with critical implications on the environment and public health, and also it points out the resource side which must be further developed under the circular economy framework with respect to safety regulations. In this context, complicated patterns at the global scale emerge under legal and illegal e-waste trades. The linkages between developed and developing countries and key issues of e-waste management sector are further examined in the book.

Wild fruits play an important role in mitigating hunger in the developing world. As a sustainable and natural food source in rural areas, these fruits have a strong effect on regional food security and poverty alleviation. This makes the utilization of wild foods incredibly important for native populations both in terms of food security and economics. There are many traditional methods for wild fruit harvesting, indigenous tree and plant domestication and cultivation passed down through generations that are sustainable and economically viable, ultimately contributing to a better quality of life for large sections of the developing world. To date there has not been a reference work focusing on the full scope of wild fruits from their growth and chemical makeup to their harvest, distribution, health effects and beyond. Wild Fruits: Composition, Nutritional Value and Products adequately fills this gap, expansively covering the utilization of multi-purpose wild fruits in regions worldwide. Effects on quality of life, food security, economics and health are extensively covered. Over 31 wild fruit species are examined, with individual chapters focusing on each species' phytochemical constituents, bioactive compounds, traditional and medicinal uses and chemical composition. Harvest, post-harvest and consumption methods are covered for each, as are their overall effect on the food security and economics of their native regions. This book is essential for researchers in search of a comprehensive singular source for the chemical makeups and cultivation of indigenous wild fruits and their many benefits to their native regions.

Beyond Mobility is about prioritizing the needs and aspirations of people and the creation of great places. This is as important, if not more important, than expediting movement. A stronger focus on accessibility and place creates better communities, environments, and economies. There are many examples of communities across the globe working to create a seamless fit between transit and surrounding land uses, retrofit car-oriented suburbs, reclaim surplus or dangerous roadways for other activities, and revitalize neglected urban spaces like abandoned railways in urban centers. The authors draw on experiences and data from a range of cities and countries around the globe in making the case for moving beyond mobility.

Electronic Waste Management and Treatment Technology applies the latest research for designing waste treatment and disposal strategies. Written for researchers who are exploring this emerging topic, the book begins with a short, but rigorous, discussion of electric waste management that outlines common hazardous materials. such as mercury, lead, silver and flame-retardants. The book also discusses the fate of metals contained in waste electrical and electronic equipment in municipal waste treatment. Materials and methods for the remediation, recycling and treatment of plastic waste collected from waste electrical and electronic equipment (WEEE) are also covered. Finally, the book covers the depollution benchmarks for capacitors, batteries and printed circuit boards from waste electrical and electronic equipment (WEEE) and the recovery of waste printed circuit boards through pyrometallurgy. Describes depollution benchmarks for capacitors, batteries and printed wiring boards from waste electronics Covers metals contained in waste electrical and electronic equipment in municipal waste Provides tactics for the recycling of mixed plastic waste from electrical and electronic equipment

Urban Ecology

Grandad Mandela

The EPA's Campaign to Expand Clean Air Regulations

OECD Studies on Water Water Security for Better Lives

Entrepreneurship in the Fourth Sector

A Materials Balance Approach

Emergence and Embodiment

The authors in this volume make a case for LTSER’s potential in providing insights, knowledge and experience necessary for a sustainability transition. This expertly edited selection of contributions from Europe and North America reviews the development of LTSER since its inception and assesses its current state, which has evolved to recognize the value of formulating solutions to the host of ecological threats we face. Through many case studies, this book gives the reader a greater sense of where we are and what still needs to be done to engage in and make meaning from long-term, place-based and cross-disciplinary engagements with socio-ecological systems.

Critically examines the EPA's new stricter standards for levels of particulate matter and ozone. Argues that the EPA's scientific studies and reasoning are flawed. Suggests that allowing the standards to go through will allow the EPA unwarranted expansion of its regulatory power at the cost of farmers and ranchers. Annotation copyrighted by Book News, Inc., Portland, OR

The growing interest in replacing petroleum-based products by inexpensive, renewable, natural materials will have a significant impact on sustainability, environment, and the polymer industry. This book provides scientists a useful framework to help take advantage of the latest research conducted in this rapidly advancing field enabling them to develop and commercialize their own products quickly and more successfully.

A comprehensive analysis of an environmental tax reform where people are taxed on pollution and the use of natural resources instead of on their income, it looks at the challenges involved in implementing this tax reform across Europe.

Processing and Characterization

Paper Regulations

Tropical Deforestation

Development Through the Lifespan

Planning Cities for People and Places

Challenges and Opportunities in India

Polluted Science

There is increasing public, media and policy interest in the concepts of carbon footprints and the emissions associated with international trade. Many wonder if our growing consumption of imported products offsets our gains in climate policy. A variety of publications suggest that emission reductions in rich countries are offset by increased imports: i.e. our national carbon footprint is growing while our territorial emissions are getting smaller. Some refute this claim stating that the methods and data are unreliable, while others acknowledge the issue but argue it is not important for climate policy. This report aims to dispel some myths about carbon footprints and trade-adjusted emission inventories. A review of studies finds large variations between studies of the Nordic countries, but closer inspection shows that many of the variations are due to inconsistent definitions and non-comparable methods. Calculations using a consistent global model provide updated estimates for the Nordic countries in 1997, 2001, and 2004. A general observation for the Nordic countries is that the overall carbon footprint is larger than territorial based emissions, and that the difference is increasing. Further we also observe an increase in the total carbon footprint from 2001 to 2004. This stresses the need for policy makers to track the cause-effect chains between consumption and production to understand and mitigate potential carbon leakage. The study was carried out by researchers from CICERO and MiSA and was financed by the Nordic Council of Ministers.

Handbook of Electronic Waste Management: International Best Practices and Case Studies begin with a brief summary of the environmental challenges associated with the approaches used in international e-waste handling. The book’s authors offer a detailed presentation of e-waste handling methods that also includes examples to further demonstrate how they work in the real world. This is followed by data that reveals the geographies of e-waste flows at global, national and subnational levels. Users will find this resource to be a detailed presentation of e-waste estimation methods that also addresses both the handling of e-waste and their hazardous effect on the surrounding environment. Includes case studies to illustrate the implementation of innovative e-waste treatment technologies Provides methods for designing and managing e-waste management networks in accordance with regulations, fulfilment obligations and process efficiency Reference guide for adapting traditional waste management methods and handling practices to the handling and storage of electronic waste until disposal Provides e-waste handling solutions for both urban and rural perspectives

(economy colour version)Winter has fangs.When Hilzie’s son disappears, a wild winter snowstorm brings her face to face with an ageless winter hunger.Are a storyteller’s heart and imagination enough to bring her boy home?Find out in this suspenseful adventure story!

We are all concerned by the environmental threats facing us today. Environmental issues are a major area of concern for policy makers, industrialists and public groups of many different kinds. While science seems central to our understanding of such threats, the statements of scientists are increasingly open to challenge in this area. Meanwhile, citizens may find themselves labelled as ‘ignorant’ in environmental matters. In Citizen Science Alan Irwin provides a much needed route through the fraught relationship between science, the public and the environmental threat.

A Policy for Green Growth

E-Waste Management

Air Pollution and Human Health

Wild Fruits: Composition, Nutritional Value and Products

Understanding Planned Obsolescence

A Global Perspective

Chicken 20 Ways

"...profoundly moving..." -Publishers Weekly Nelson Mandela’s two great-grandchildren ask their grandmother, Mandela’s youngest daughter, 15 questions about their grandad – the global icon of peace and forgiveness who spent 27 years in prison. They learn that he was a freedom fighter who put down his weapons for the sake of peace, and who then became the President of South Africa and a Nobel Peace Prize-winner, and realise that they can continue his legacy in the world today. Seen through a child’s perspective, and authored jointly by Nelson Mandela’s great-grandchildren and daughter, this amazing story is told as never before to celebrate what would have been Nelson’s Mandela 100th birthday.

For use in schools and libraries only. In this variation on the story of The Fisherman And His Wife, a young Ukrainian girl must repeatedly return to the wren she has rescued to relay her parents’ increasingly greedy demands.

New Urbanism and American Planning presents the history of American planners' quest for good cities and shows how New Urbanism is a culmination of ideas that have been evolving since the nineteenth century. In her survey of the last hundred or so years of urbanist ideals, Emily Talen identifies four approaches to city-making, which she terms 'cultures': incrementalism, plan-making, planned communities, and regionalism. She shows how these cultures connect, overlap, and conflict and how most of the ideas about building better settlements are recurrent. In the first part of the book Talen sets her theoretical framework and in the second part provides detailed analysis of her four 'cultures'.She concludes with an assessment of the successes and failures of the four cultures and the need to integrate these ideas as a means to promoting good urbanism in America.

The problems related to the process of industrialisation such as biodiversity depletion, climate change and a worsening of health and living conditions, especially but not only in developing countries, intensify. Therefore, there is an increasing need to search for integrated solutions to make development more sustainable. The United Nations has acknowledged the problem and approved the "2030 Agenda for Sustainable Development". On 1st January 2016, the 17 Sustainable Development Goals (SDGs) of the Agenda officially came into force. These goals cover the three dimensions of sustainable development: economic growth, social inclusion and environmental protection. The Encyclopedia of the UN Sustainable Development Goals comprehensively addresses the SDGs in an integrated way. It encompasses 17 volumes, each one devoted to one of the 17 SDGs. This volume addresses SDG 15, namely "Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss" and contains the description of a range of terms, which allow a better understanding and foster knowledge. Concretely, the defined targets are: Ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements Promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally Combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world Ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and protect and prevent the extinction of threatened species Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products Introduce measures to prevent the introduction and significantly Reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species Integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities Editorial Board Alexandra Aragão, Desalegn Yayeh Ayal, Ayansina Ayanlade, Anabela Marisa Azul, Adriana Consorte-McCrea, Muhammad Farooq, Ana Catarina Luz, Maria P. Martin, Sharif A. Mukul, Nandhivarma Muthu, Robert Russell Monteith Paterson, Isabel Ruiz-Mallén

Survey of Energy Resources

A Guide to Current Knowledge and Sustainable Management

The Global Supply Chain

The Hidden Costs of Electricity

Long Term Socio-Ecological Research

From Pollution to Resource

Small Farmers and Land Clearing in the Ecuadorian Amazon

The highly publicized obscenity trial of Radclyffe Hall's The Well of Loneliness (1928) is generally recognized as the crystallizing moment in the construction of a visible modern English lesbian culture, marking a great divide between innocence and deviance, private and public, New Woman and Modern Lesbian. Yet despite unreserved agreement on the importance of this cultural moment, previous studies often reductively distort our reading of the formation of early twentieth-century lesbian identity, either by neglecting to examine in detail the developments leading up to the ban or by framing events in too broad a context against other cultural phenomena. Fashioning Sapphism locates the novelist Radclyffe Hall and other prominent lesbians—including the pioneer in women's policing, Mary Allen, the artist Gluck, and the writer Bryher—within English modernity through the multiple sites of law, sexology, fashion, and literary and visual representation, thus tracing the emergence of a modern English lesbian subculture in the first two decades of the twentieth century. Drawing on extensive new archival research, the book interrogates anew a range of myths long accepted without question (and still in circulation) concerning, to cite only a few, the extent of homophobia in the 1920s, the strategic deployment of sexology against sexual minorities, and the rigidity of certain cultural codes to denote lesbianism in public culture.

Upon competition of a ten year research project which analyzes the effect of air pollution and death rates in US cities, Lester B. Lave and Eugene P. Seskin conclude that the mortality rate in the US could shrink by seven percent with a similar if not greater decline in disease incidence if industries followed EPA regulations in cutting back on certain pollutant emissions. The authors claim that this reduction is sufficient to add one year to average life expectancy. Originally published in 1977.

Laura Berk’s Development Through the Lifespan is relied upon in classrooms worldwide for its clear, engaging writing style, exceptional multicultural and cross-cultural focus, cutting-edge consideration of the interrelationships between heredity and environment, rich examples, and long-standing commitment to presenting the most up-to-date scholarship. This new edition continues to offer students research-based practical applications that they can relate to their personal and professional lives. Laura Berk, renowned professor and researcher, has revised the text with new pedagogy, a heightened emphasis on the interplay between heredity and environment, and an enhanced focus on many social policy issues, while emphasizing the lifespan perspective throughout. The latest theories and findings in the field are made accessible to students in a manageable and relevant way. Berk’s signature storytelling style invites students to actively learn beside the text’s "characters." Students are provided with an especially clear and coherent understanding of the sequence and underlying processes of human development, emphasizing the interrelatedness of all domains–physical, cognitive, emotional, social–throughout the text narrative and in special features. Berk also helps students connect their learning to their personal and professional areas of interest. Her voice comes through when speaking directly about issues students will face in their future pursuits as parents, educators, health care providers, social workers, and researchers. As members of a global and diverse human community, students are called to intelligently approach the responsibility of understanding and responding to the needs and concerns of both young and old. While carefully considering the complexities of human development, Berk presents classic and emerging theories in an especially clear, engaging writing style, with a multitude of research-based, real-world, cross-cultural, and multicultural examples. Strengthening the connections

among developmental domains and of theory and research with applications, this edition's extensive revision brings forth the most recent scholarship, representing the changing field of human development. Visit the Preview Website to see sample chapters, get information on the supplements (including sample videos and on-line simulations), and much more, click here. 0205968988 / 9780205968985 Development Through the Lifespan Plus NEW MyDevelopmentLab with Pearson eText -- Access Card Package Package consists of: 0205909744 / 9780205909742 NEW MyDevelopmentLab with Pearson eText -- Valuepack Access Card -- for Laura E. Berk 0205957609 / 9780205957606 Development Through the Lifespan

This publication examines the critical issues surrounding water security (water shortage, water excess, inadequate water quality, the resilience of freshwater systems), providing a rationale for a risk-based approach and the management of trade-offs between water and other policies.

An International Perspective on the Interaction Between Humans and Nature

The Conflict of Cultures

International Best Practices and Case Studies

New Urbanism and American Planning

Entrepreneurial Ecosystems and Sustainable Business Models

A Study of People, Expertise and Sustainable Development

Luba and the Wren

Entrepreneurship in the Fourth SectorEntrepreneurial Ecosystems and Sustainable Business ModelsSpringer Nature

This collection is packed with 20 easy-to-make recipes that rely on little more than chicken and pantry staples. You'll learn how a few flavor-packed ingredients can transform humble chicken into the star of the dinner table. Take our spice-cabinet chicken recipes, which will simplify your grocery shopping—just raid your spice cabinet for three delicious takes on roast whole chicken. Or how about Southern-Style Stewed Chicken and Rice, a comforting one-pot meal that features rice plumped with flavored stock and tossed with tender pieces of shredded chicken? Chicken Mole Poblano surprisingly depends on pantry essentials such as dried chiles, nuts, a handful of common dried herbs and spices, and a bit of chocolate for its deeply complex flavor.

Urban Ecology is a rapidly growing field of academic and practical significance. Urban ecologists have published several conference proceedings and regularly contribute to the ecological, architectural, planning, and geography literature. However, important papers in the field that set the foundation for the discipline and illustrate modern approaches from a variety of perspectives and regions of the world have not been collected in a single, accessible book. Foundations of Urban Ecology does this by reprinting important European and American publications, filling gaps in the published literature with a few, targeted original works, and translating key works originally published in German. This edited volume will provide students and professionals with a rich background in all facets of urban ecology. The editors emphasize the drivers, patterns, processes and effects of human settlement. The papers they synthesize provide readers with a broad understanding of the local and global aspects of settlement through traditional natural and social science lenses. This interdisciplinary vision gives the reader a comprehensive view of the urban ecosystem by introducing drivers, patterns, processes and effects of human settlements and the relationships between humans and other animals, plants, ecosystem processes, and abiotic conditions. The reader learns how human institutions, health, and preferences influence, and are influenced by, the others members of their shared urban ecosystem.

Planned obsolescence is a strategy used to make products obsolete, leading to their premature replacement. The result is the over-exploitation of natural resources, increased waste and detrimental social impacts. It is a known practice in consumer electronics and affects other industries as they put profit before consequence. A ground-breaking new book, Understanding Planned Obsolescence looks at the causes, cost and impact of planned obsolescence. It considers the legal and economic frameworks to overcome the practice and how to mitigate its effects. It also unearths new patterns of production and consumption highlighting more sustainable development models. Including a wide range of case studies from Europe, USA and South America, Understanding Planned Obsolescence is a vital step forward for the future of business and academia alike.

Methods and Import/Export Corrected Results from the Nordic Countries in Global Carbon Footprint Studies

Global Carbon Footprints

Citizen Science

Policy and Prosecution

Reference Manual on Scientific Evidence

Unsustainability Through Production, Consumption and Waste Generation

E-Waste in Transition

With global revenue surpassing twenty-five billion dollars annually, organic agriculture is a highly visible and rapidly growing component of agricultural production. In Organic Agriculture: A Global Perspective, Paul Kristiansen, Acram Tajl, and John Reganold, and their international group of contributors scientifically review key aspects of organic agriculture. At the intersection of research, education, and practice, the contributors look at the organic agricultural movement's successes and limitations. The first half of this book critically evaluates the agricultural production of both plants and livestock in organic farming systems. All major aspects of organic agriculture are explored, including historical background and underlying principles, soil-fertility management, crop and animal production, breeding strategies, and crop protection. This global and comprehensive overview also addresses the economic, social, and political aspects of organic farming. These include economics and marketing; standards and certification; environmental impacts and social responsibility; and research, education, and extension. The book is a unique and timely science-based international work documenting current practices in organic agriculture and evaluating their strengths and weaknesses. For more than two decades, research into organic methods by mainstream scientists has generated a large body of information that can now be integrated and used for assessing the actual impacts of organic farming in a wide range of disciplines. The knowledge of selected international experts has been combined in one volume, providing a comprehensive review of organic farming globally. Researchers, teachers, extensionists, students, primary producers and others around the world who are interested in sustainable agriculture will find this book to be a valuable and reliable resource.

This monograph length report, first published in 1970, originated from a program of research at Resources for the Future that dealt with the management of residuals and of environmental quality. It presents some of the broad concepts that the program was based on and represents the effort to break out of the traditional approach in pollution and policy research, which had treated air, water, and solid waste problems as separate categories. This book will be of interest to students of economics and environmental studies.

This book offers an extensive review of e-waste management in India, the world's third-largest producer of waste from electrical and electronic equipment. With a focus on the evolution of legalframeworks in India and the world, it presents impacts and outcomes; challenges and opportunities; and management strategies and practices to deal with e-waste. First of its kind, the book examines relevant concepts and issues from across 15 disciplines and six areas of policy making and will serve as a comprehensive knowledge base on electronic waste in India. It links key themes to the global context of Sustainable Development Goals and explores the convergence with technological, infrastructural, and social initiatives in e-waste management. A range of topics are discussed, such as resource efficiency policies; circular economy; toxicity; technicalities and complexities of e-waste management including role of the informal sector and need for recognising social and human costs in policy making. The book deals with the role of statistics; legal trends and reforms; linkages with green Agenda 2030 and UN initiatives; implementation of Extended Producer Responsibility (EPR); environmental factors; business prospects; consequences on human health; Life Cycle Impact Assessment; the 'six Rs' (Responsible use, Repair, Refurbish, Recycle, Recover and Reuse); recycling practices and problems, material flow and informal sector in trade value chain; fostering partnership between formal-informal sectors; safe disposal; alternatives to landfilling; role of jurisprudence and regulatory bodies; and education and awareness. It also includes a survey of pan-India initiatives and trajectories of law-driven initiatives for effective e-waste management along with responses from industries and producers. Timely and essential, this volume will be useful to scholars and researchers of environment studies, digital waste management, waste management, development studies, public policy, political ecology, sustainable development, technology and manufacturing, design and instrumentation, environmental and international law, taxation, commerce, electronic industry, economics, business management, metallurgy, and engineering, labour studies, as well as to policymakers, nongovernmental organisations, and interested general readers.

In this book, Slava Gerovitch argues that Soviet cybernetics was not just an intellectual trend but a social movement for radical reform in science and society as a whole. Followers of cybernetics viewed computer simulation as a universal method of problem solving and the language of cybernetics as a language of objectivity and truth. With this new objectivity, they challenged the existing order of things in economics and politics as well as in science. The history of Soviet cybernetics followed a curious arc. In the 1950s it was labeled a reactionary pseudoscience and a weapon of imperialist ideology. With the arrival of Khrushchev's political "thaw," however, it was seen as an innocent victim of political oppression, and it evolved into a movement for radical reform of the Stalinist system of science. In the early 1960s it was hailed as "science in the service of communism," but by the end of the decade it had turned into a shallow fashionable trend. Using extensive new archival materials, Gerovitch argues that these fluctuating attitudes reflected profound changes in scientific language and research methodology across disciplines, in power relations within the scientific community, and in the political role of scientists and engineers in Soviet society. His detailed analysis of scientific discourse shows how the Newspeak of the late Stalinist period and the Cyberspeak that challenged it eventually blended into "CyberNewspeak."

Organic Agriculture

Hilzie Hickathrift and the Winter Wyrn

From Newspeak to Cyberspeak

Beyond Mobility

New Essays on Second-Order Systems Theory

Studies in Society-Nature Interactions Across Spatial and Temporal Scales

The Uninhabitable Earth

Emerging in the 1940s, the first cybernetics—the study of communication and control systems—was mainstreamed under the names artificial intelligence and computer science and taken up by the social sciences, the humanities, and the creative arts. In Emergence and Embodiment, Bruce Clarke and Mark B. N. Hansen focus on cybernetic developments that stem from the second-order turn in the 1970s, when the cyberneticist Heinz von Foerster catalyzed new thinking about the cognitive implications of self-referential systems. The crucial shift he inspired was from first-order cybernetics' attention to homeostasis as a mode of autonomous self-regulation in mechanical and informatic systems, to second-order concepts of self-organization and autopoiesis in embodied and metabiotic systems. The collection opens with an interview with von Foerster and then traces the lines of neocybernetic thought that have followed from his work. In response to the apparent dissolution of boundaries at work in the contemporary technosciences of emergence, neocybernetics observes that cognitive systems are operationally bounded, semi-autonomous entities coupled with their environments and other systems. Second-order systems theory stresses the recursive complexities of observation, mediation, and communication. Focused on the neocybernetic contributions of von Foerster, Francisco Varela, and Niklas Luhmann, this collection advances theoretical debates about the cultural, philosophical, and literary uses of their ideas. In addition to the interview with von Foerster, Emergence and Embodiment includes essays by Varela and Luhmann. It engages with Humberto Maturana's and Varela's creation of the concept of autopoiesis, Varela's later work on neurophenomenology, and Luhmann's adaptations of autopoiesis to social systems theory. Taken together, these essays illuminate the shared commitments uniting the broader discourse of neocybernetics. Contributors. Linda Brigham, Bruce Clarke, Mark B. N. Hansen, Edgar Landgraf, Ira Livingston, Niklas Luhmann, Hans-Georg Moeller, John Protevi, Michael Schiltz, Evan Thompson, Francisco J. Varela, Cary Wolfe

The key finding of this review conducted by the Australian Academy of Technological Sciences and Engineering is that a greater focus on externalities, preferably quantified in monetary terms, will help Australia to gain maximum social and environmental benefit from the portfolio of electricity generating technologies it will use for meeting emission reduction targets. Externalities are environmental and social costs that are not accounted for in the market price of electricity. Existing methods for valuing externalities do give an idea of their relative costs for different technologies in Australia but some major gaps and uncertainties need to be resolved through further work, preferably via collaboration with international centres of expertise.

Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer

Life After Warming

Handbook of Electronic Waste Management

Biopolymers and Composites

Life on Land

Economics and the Environment