

Biosecurity The Socio Politics Of Invasive Specie

Synthetic biology is a field of biotechnology that is rapidly growing in various applications, such as in medicine, environmental sustainability, and energy production. However these technologies also have unforeseen risks and applications to humans and the environment. This open access book presents discussions on risks and mitigation strategies for these technologies including biosecurity, or the potential of synthetic biology technologies and processes to be deliberately misused for nefarious purposes. The book presents strategies to prevent, mitigate, and recover from 'dual-use concern' biosecurity challenges that may be raised by individuals, rogue states, or non-state actors. Several key topics are explored including opportunities to develop more coherent and scalable approaches to govern biosecurity from a laboratory perspective up to the international scale and strategies to prevent potential health and environmental hazards posed by deliberate misuse of synthetic biology without stifling innovation. The book brings together the expertise of top scholars in synthetic biology and biotechnology risk assessment, management, and communication to discuss potential biosecurity governing strategies and offer perspectives for collaboration in oversight and future regulatory guidance.

A comprehensive guide to the proactive management of alien plants, synthesising the most current global theory and best management practice.

We live in a world that is increasingly dependent on international trade in a context of substantial regional/national political tensions. Adding to this is an emerging understanding and concern about the social impact of biosecurity and ecosystem services risks associated with such trade. As the key international trade 'arbiter', the World Trade Organization (WTO) has never before faced such complexity within its decision-making remit. With increasing numbers of bilateral and regional agreements, as well as new developments emerging such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) initiated by multi-national corporations in 2018, the WTO needs to implement ways of reinforcing its legitimacy and enhancing its relevance. This book provides an original analysis of these linked developments and delivers a timely contribution to resolving environment-related international trade disputes. It provides a clear roadmap for improving WTO trade dispute resolution procedures so both biosecurity and ecosystem services risks are considered in evaluating the social, economic and environmental impacts of international trade proposals. In so doing, the WTO should deliver enhanced multilateral social welfare.

This handbook provides a detailed analysis of threats and risk in the international system and of how governments and their intelligence services must adapt and function in order to manage the evolving security environment. This environment, now and for the foreseeable future, is characterised by complexity. The development of disruptive digital technologies; the vulnerability of critical national infrastructure; asymmetric threats such as terrorism; the privatisation of national intelligence capabilities: all have far reaching implications for security and risk management. The leading academics and practitioners who have contributed to this handbook have all done so with the objective of cutting through the complexity, and providing insight on the most pressing security, intelligence, and risk factors today. They explore the changing nature of conflict and crises; interaction of the global with the local; the impact of technological; the proliferation of hostile ideologies and the challenge this poses to traditional models of intelligence; and the impact of all these factors on governance and ethical frameworks. The handbook is an invaluable resource for students and professionals concerned with contemporary security and how national intelligence must adapt to remain effective.

Experiments in Skin

The Oxford Handbook of Global Health Politics

Assembling Neoliberalism

Biosecurity Surveillance

Dual-use life science research and biosecurity in the 21st Century: Social, Technical, Policy, and Ethical Challenges

Global Perspectives

One Health

This book is based on EU-funded project PLANTFOODSEC, covering intentional and unintentional threats to plant biosecurity and to food safety areas. Biosecurity is a strategic and integrated approach for analysing and managing relevant risks to human, animal and plant life and health, and associated risks to the environment. Interest in biosecurity has risen considerably over the last decade in parallel with the increasing trade in food and plant and animal products; higher levels of international travel; new outbreaks of transboundary diseases. Although most diseases outbreaks have natural causes or are the result of inadvertent introductions of pathogens through human activities, the risk of a deliberate introduction of a high consequence plant pathogen cannot be excluded. Vigilance is required to identify, prevent and manage new and emerging issues that could impact on production capacity, plant biosecurity or food safety and food chain resilience. /div

Our understanding of the ecological history of European forests has been transformed in the last twenty years. Bringing together key findings from across the continent, this book provides a comprehensive account of the relevance of historical studies to current conservation and management of forests. It combines theory with a series of regional case studies to show how different aspects of forestry play out according to the landscape and historical context of the local area.

Agricultural trade is an engine for economic growth, yet many countries lack the competence and confidence to negotiate market access effectively. Access requires compliance with a set of phytosanitary measures imposed by the importing country. However, by following a structured process, negotiations can move beyond simple compliance to a more mutually beneficial solution. Beyond Compliance: A Production Chain Framework for Plant Health Risk Management in Trade provides a series of decision support tools that can be used to manage and demonstrate plant health risk management. The tools, developed within a production chain framework and Systems Approach, were developed using real trade cases in Southeast Asia. The project aimed to support national plant protection organisations and trade negotiators seeking to ensure safe trade with more risk-proportionate and suitable risk management plans. The Beyond Compliance project was funded by the Standards and Trade Development Facility, a global partnership established by the Food and Agriculture Organization of the United Nations, the World Bank, the World Health Organization, the World Organisation for Animal Health and the World Trade Organization.

Discusses the benefits and risks, as well as the economic and socio-political realities, of rewilding as a novel conservation tool.

Science, politics and zoonotic disease in Africa

Emerging Threats of Synthetic Biology and Biotechnology

Results from a European Network of Excellence

Mosquitopia

Expertise, Practices, Subjects

Avian Influenza in Turkey and the Becoming of a Global Threat

From Wildwood to Managed Landscapes

Interdisciplinarity has become a buzzword in academia, as research universities funnel their financial resources toward collaborations between faculty in different disciplines. In theory, interdisciplinary collaboration breaks down artificial divisions between different departments, allowing more innovative and sophisticated research to flourish. But does it actually work this way in practice? Investigating Interdisciplinary Collaboration puts the common beliefs about such research to the test, using empirical data gathered by scholars from the United States, Canada, and Great Britain. The book's contributors critically interrogate the assumptions underlying the fervor for interdisciplinarity. Their attentive scholarship reveals how, for all its potential benefits, interdisciplinary collaboration is neither immune to academia's status hierarchies, nor a simple antidote to the alleged shortcomings of disciplinary study. Chapter 10 is available Open Access here (https://www.ncbi.nlm.nih.gov/books/NBK395883) A history of COVID-19 and the sociopolitical crises that led to the 2020 global pandemic The COVID-19 pandemic shocked the world. It shouldn't have. Since this century's turn, epidemiologists have warned of new infectious diseases. Indeed, H1N1, H7N9, SARS, MERS, Ebola Makona, Zika, and a variety of lesser viruses have emerged almost annually. But what of the epidemiologists themselves? Some bravely descended into the caves where bat species hosted coronaviruses, including the strains that evolved into the COVID-19 virus. Yet, despite their own warnings, many of the researchers appear unable to understand the true nature of the disease—as if they are dead to what they've seen. Dead Epidemiologists is an eclectic collection of commentaries, articles, and interviews revealing the hidden-in-plain-sight truth behind the pandemic: Global capital drove the deforestation and development that exposed us to new pathogens. Rob Wallace and his colleagues—ecologists, geographers, activists, and, yes, epidemiologists—unpack the material and conceptual origins of COVID-19. From deepest Yunnan to the boardrooms of New York City, this book offers a compelling diagnosis of the roots of COVID-19, and a stark prognosis of what—without further intervention—may come.

The Routledge Handbook of Political Ecology presents a comprehensive and authoritative examination of the rapidly growing field of political ecology. Located at the intersection of geography, anthropology, sociology, and environmental history, political ecology is one of the most vibrant and conceptually diverse fields of inquiry into nature-society relations within the social sciences. The Handbook serves as an essential guide to this rapidly evolving intellectual landscape. With contributions from over 50 leading authors, the Handbook presents a systematic overview of political ecology's origins, practices and core concerns, and aims to advance both ongoing and emerging debates. While there are numerous edited volumes, textbooks, and monographs under the heading 'political ecology,' these have tended to be relatively narrow in scope, either as collections of empirically based (mostly case study) research on a given theme, or broad overviews of the field aimed at undergraduate audiences. The Routledge Handbook of Political Ecology is the first systematic, comprehensive overview of the field. With authors from North and South America, Europe, Australia and elsewhere, the Handbook of Political Ecology provides a state of the art examination of political ecology; addresses ongoing and emerging debates in this rapidly evolving field; and charts new agendas for research, policy, and activism. The Routledge Handbook of Political Ecology introduces political ecology as an interdisciplinary academic field. By presenting a 'state of the art' examination of the field, it will serve as an invaluable resource for students and scholars. It not only critically reviews the key debates in the field, but develops them. The Handbook will serve as an excellent resource for graduate and advanced undergraduate teaching, and is a key reference text for geographers, anthropologists, sociologists, environmental historians, and others working in and around political ecology.

The Ethics and Rhetoric of Invasion Ecology provides an introduction to the controversial treatment and ongoing violence routinely utilized against non-native species. Drawing from the tradition of critical animal scholars, Stanescu and Cummings have assembled a group of advocates who argue for a different kind of relationship with foreign species. Where contemporary approaches often emphasize the need to eradicate ecological invaders in order to preserve delicate habitats, the essays in this volume aim to reformulate the debate by arguing for an alternative approach that advances the possibility of an ethics of co-habitation.

Handbook of Globalisation and Tourism

Handbook on the Politics of Antarctica

Wildlife in the Anthropocene

A Material Semiotic Perspective on Living Spaces

Investigation, Control and Enforcement

Translocal Connections of Bioinsecurity

The Politics, People, Science and Historical Roots

Globalization entails the world becoming a smaller place through political, socio-cultural and economic processes. These processes have salient implications for tourism, and tourism itself is one of the driving forces behind globalization. This book is a collection of conceptual treatises by international scholars about the dynamics and reach of globalization and its relationships with tourism. It anatomizes and deconstructs the global forces, processes and challenges that face the world of tourism. It is international in scope, encyclopedic in its conceptual depth, empirically evocative, and contemporary in its coverage.

In September 2011, scientists announced new experimental findings that would not only threaten the conduct and publication of influenza research, but would have significant policy and intelligence implications. The findings presented a modified variant of the H5N1 avian influenza virus (hereafter referred to as the H5N1 virus) that was transmissible via aerosol between ferrets. These results suggested a worrisome possibility: the existence of a new airborne and highly lethal H5N1 virus that could cause a deadly global pandemic. In response, a series of international discussions on the nature of dual-use life science arose. These discussions addressed the complex social, technical, political, security, and ethical issues related to dual-use research. This Research Topic will be devoted to contributions that explore this matrix of issues from a variety of case study and international perspectives.

Avian influenza is considered a "global threat" and a biosecurity issue. How did that come to be? How did the avian influenza threat change as the virus spread? This book offers detailed, empirical accounts of avian influenza as the virus-and the knowledge about it -spread beyond Asia, from 2005 onwards. It also offers insights into how the concept of biosecurity has emerged in relation to recent disease outbreaks. Based on multi-sited fieldwork in Turkey and textual analyses, Translocal Connections of Bioinsecurity contributes to new ways of understanding text and field, the global and the local, and the secure and the insecure, as relational rather than opposed or unconnected, as enacted rather than pre-given. Dissertation. (Series: Civil Security. Documents on Security Research / Zivile Sicherheit. Schriften zum Fachdialog Sicherheitsforschung, Vol. 14) [Subject: Bioinsecurity, Avian Influenza, Security Studies]

The ascendancy of border studies in the last two decades or so, and the burgeoning work on nature and society neither drew attention to ecological theories of borders nor capitalised on nature as a useful avenue through which border research could be advanced. This volume fills this void by engaging with the following key questions: What insights can be drawn from species' borders to broaden understandings of bordering? What sorts of borders are engendered by various types of conservation areas? What border stories does each of these areas tell us? What do conservation-related borders teach us about multiple lines that divide societies? Answers to these questions help researchers understand a typology of nature-related borders. The primary objectives of this volume are twofold. The first objective is to expand and deepen the links between nature conservation and border studies by bringing species' borders into conversation with border studies, while at the same time paying attention to diverse conservation areas and conservation practices. The second objective is to highlight forms of borders associated with various types of conservation areas and the protection of certain types of natural resources. The manner in which nature conservation produces borders, and the forms those borders take, has the potential to enrich the conceptualisation of borders. The point of departure in this volume is that conservation practices produce feedback loops on social reality. Authors in the volume variously show that concerns with environmental protection and management offer possibilities for exploring, and even disrupting, borders within society and those between society and nature. Conservation areas in particular are crucial for a meaningful analysis of nature's borders and the discourses and narratives related to them, and how such discourses influence conservation practice. This volume is an invaluable resource for research and upper-level courses on border studies, political ecology, conservation and biodiversity management, and environmental change and social impact.

How Declining Biodiversity Endangers Health and How Bioethics Can Help

Regulating Food-borne Illness

Europe's Changing Woods and Forests

The Palgrave Handbook of Security, Risk and Intelligence

Global Health and Security in Question

Listening for Democracy

Theory and Practice Across Disciplines

Environmental politics has many faces and operates at multiple scales: it preoccupies individuals as well as governments, drives local agreements as well as international treaties, results in minor business changes as well as wholesale business decisions, and fluctuates between a politics of protest and one of accommodation. In this Very Short Introduction Andrew Dobson offers a lively and comprehensive commentary on the many facets of environmental politics today. Looking towards the future, he asks whether environmental politics will be comfortably accommodated by mainstream politics, or whether the advent of the Anthropocene - a whole new geological epoch driven by human impact on the environment - will herald a break with the politics of growth that has dominated social life since the beginning of the Industrial Revolution. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.

Protecting and promoting health is inherently a political endeavor that requires a sophisticated understanding of the distribution and use of power. Yet while the global nature of health is widely recognized, its political nature is less well understood. In recent decades, the interdisciplinary field of global health politics has emerged to demonstrate the interconnections of health and core political topics, including foreign and security policy, trade, economics, and development. Today a growing body of scholarship examines how the global health landscape has both shaped and been shaped by political actors and structures. The Oxford Handbook of Global Health Politics provides an authoritative overview and assessment of research on this important and complicated subject. The volume is motivated by two arguments. First, health is not simply a technical subject, requiring evidence-based solutions to real-world problems, but an arena of political contestation where norms, values, and interests also compete and collide. Second, globalization has fundamentally changed the nature of health politics in terms of the ideas, interests, and institutions involved. The volume comprises more than 30 chapters by leading experts in global health and politics. Each chapter provides an overview of the state of the art on a given theoretical perspective, major actor, or global health issue. The Handbook offers both an excellent introduction to scholars new to the field and also an invaluable teaching and research resource for experts seeking to understand global health politics and its future directions.

Biosecurity is the assessment and management of potentially dangerous infectious diseases, quarantined pests, invasive (alien) species, living modified organisms, and biological weapons. It is a holistic concept of direct relevance to the sustainability of agriculture, food safety, and the protection of human populations (including bio-terrorism), the environment, and biodiversity. Biosecurity is a relatively new concept that has become increasingly prevalent in academic, policy and media circles, and needs a more comprehensive and inter-disciplinary approach to take into account mobility, globalisation and climate change. In this introductory volume, biosecurity is presented as a governance approach to a set of concerns that span the protection of indigenous biological organisms, agricultural systems and human health, from invasive pests and diseases. It describes the ways in which biosecurity is understood and theorized in different subject disciplines, including anthropology, political theory, ecology, geography and environmental management. It examines the different scientific and knowledge practices connected to biosecurity governance, including legal regimes, ecology, risk management and alternative knowledges. The geopolitics of biosecurity is considered in terms of health, biopolitics and trade governance at the global scale. Finally, biosecurity as an approach to actively secure the future is assessed in the context of future risk and uncertainties, such as globalization and climate change.

The Antarctic and Southern Ocean are hotspots for contemporary endeavours to oversee 'the last frontier' of the Earth. The Handbook on the Politics of Antarctica offers a wide-ranging and comprehensive overview of the governance, geopolitics, international law, cultural studies and history of the region. Four thematic sections take readers from the earliest human encounters to contemporary resource exploitation and climate change. Written by leading experts, the Handbook brings together the very best interdisciplinary social science and humanities scholarship on the Antarctic and Southern Ocean.

Biosecurity

The International Encyclopedia of Geography

The Routledge Handbook of Political Ecology

Biosecurity Interventions

Investigating Interdisciplinary Collaboration

Biosecurity Challenges of the Global Expansion of High-Containment Biological Laboratories

The Human Dimensions of Forest and Tree Health

This book explores the specifically human dimensions of the problem posed by a new generation of invasive pests and pathogens to tree health worldwide. The growth in global trade and transportation in recent decades, along with climate change, is allowing invasive pests and pathogens to establish in new environments, with profound consequences for the ecosystem services provided by trees and forests, and impacts on human wellbeing. The central theme of the book is to consider the role that social science can play in better understanding the social, economic and environmental impacts of such tree disease and pest outbreaks. Contributions include explorations of how pest outbreaks are socially constructed, drawing on the historical, cultural, social and situated contexts of outbreaks; the governance and economics of tree health for informing policy and decision-making; stakeholder engagement and communication tools; along with more philosophical approaches that draw on environmental ethics to consider 'non-human' perspectives. Taken together the book makes theoretical, methodological and applied contributions to our understanding of this important subject area and encourages researchers from across the social sciences and humanities to bring their own disciplinary perspectives and expertise to address the complexity that is the human dimensions of forest and tree health. Chapters 5 and 11 are open access under a CC BY 4.0 license via link.springer.com.

Assesses a promising new approach to restoring the health of our bodies and our planet Most of us are familiar with probiotics added to milk or yogurt to improve gastrointestinal health. In fact, the term refers to any intervention in which life is used to manage life—from the microscopic, like consuming

fermented food to improve gut health, to macro approaches such as biological pest control and natural flood management. In this ambitious and original work, Jamie Lorimer offers a sweeping overview of diverse probiotic approaches and an insightful critique of their promise and limitations. During our current epoch—the Anthropocene—human activity has been the dominant influence on climate and the environment, leading to the loss of ecological abundance, diversity, and functionality. Lorimer describes cases in which scientists and managers are working with biological processes to improve human, environmental, and even planetary health, pursuing strategies that stand in contrast to the “antibiotic approach”: Big Pharma, extreme hygiene, and industrial agriculture. The Probiotic Planet focuses on two forms of “rewilding” occurring on vastly different scales. The first is the use of keystone species like wolves and beavers as part of landscape restoration. The second is the introduction of hookworms into human hosts to treat autoimmune disorders. In both cases, the goal is to improve environmental health, whether the environment being managed is planetary or human. Lorimer argues that, all too often, such interventions are viewed in isolation, and he calls for a rethinking of artificial barriers between science and policy. He also describes the stark and unequal geographies of the use of probiotic approaches and examines why these patterns exist. The author’s preface provides a thoughtful discussion of the COVID-19 pandemic as it relates to the probiotic approach. Informed by deep engagement with microbiology, immunology, ecology, and conservation biology as well as food, agriculture, and waste management, The Probiotic Planet offers nothing less than a new paradigm for collaboration between the policy realm and the natural sciences.

In recent years, new disease threats such as SARS, avian flu, mad cow disease, and drug-resistant strains of malaria and tuberculosis have garnered media attention and galvanized political response. Proposals for new approaches to “securing health” against these threats have come not only from public health and medicine but also from such fields as emergency management, national security, and global humanitarianism. This volume provides a map of this complex and rapidly transforming terrain. The editors focus on how experts, public officials, and health practitioners work to define what it means to “secure health” through concrete practices such as global humanitarian logistics, pandemic preparedness measures, vaccination campaigns, and attempts to regulate potentially dangerous new biotechnologies. As the contributions show, despite impressive activity in these areas, the field of “biosecurity interventions” remains unstable. Many basic questions are only beginning to be addressed: Who decides what counts as a biosecurity problem? Who is responsible for taking action, and how is the efficacy of a given intervention to be evaluated? It is crucial to address such questions today, when responses to new problems of health and security are still taking shape. In this context, this volume offers a form of critical and reflexive knowledge that examines how technical efforts to increase biosecurity relate to the political and ethical challenges of living with risk.

This edited volume brings together natural scientists, social scientists and humanists to assess if (or how) we may begin to coexist harmoniously with the mosquito. The mosquito is humanity’s deadliest animal, killing over a million people each year by transmitting malaria, yellow fever, Zika and several other diseases. Yet of the 3,500 species of mosquito on Earth, only a few dozen of them are really dangerous—so that the question arises as to whether humans and their mosquito foe can learn to live peacefully with one another. Chapters assess polarizing arguments for conserving and preserving mosquitoes, as well as for controlling and killing them, elaborating on possible consequences of both strategies. This book provides informed answers to the dual question: could we eliminate mosquitoes, and should we? Offering insights spanning the technical to the philosophical, this is the “go to” book for exploring humanity’s many relationships with the mosquito—which becomes a journey to finding better ways to inhabit the natural world. Mosquitopia will be of interest to anyone wanting to explore dependencies between human health and natural systems, while offering novel perspectives to health planners, medical experts, environmentalists and animal rights advocates. The Open Access version of this book, available at <http://www.taylorfrancis.com/books/e/9781003056034>, has been made available under a Creative Commons Attribution-Non Commercial-No Derivatives 4.0 license

Beyond Compliance
Race and Beauty in the Shadows of Vietnam
Postenvironmentalism
Addressing Security and Resilience Issues

Wto And Environment-related International Trade Disputes, The: Biosecurity And Ecosystem Services Risks
People, the Earth, Environment, and Technology. C-Cor

This handbook provides a comprehensive overview of the assessment and management of potentially dangerous infectious diseases, quarantined pests, invasive (alien) species, living modified organisms and biological weapons, from a multitude of perspectives. Issues of biosecurity have gained increasing attention over recent years but have often only been addressed from narrow disciplines and with a lack of integration of theoretical and practical approaches. The Routledge Handbook of Biosecurity and Invasive Species brings together both the natural sciences and the social sciences for a fully rounded perspective on biosecurity, shedding light on current national and international management frameworks with a mind to assessing possible future scenarios. With chapters focussing on a variety of ecosystems - including forests, islands, marine and coastal and agricultural land - as well as from the industrial scale to individual gardens, this handbook reviews the global state of invasions and vulnerabilities across a wide range of themes and critically analyses key threats and threatening activities, such as trade, travel, land development and climate change. Identifying invasive species and management techniques from a regional to international scale, this book will be a key reference text for a wide range of students and academics in ecology, agriculture, geography, human and animal health and interdisciplinary environmental and security studies.

"Climate change is an issue that transcends and exceeds formal political and geographical boundaries. Social scientists are increasingly studying how effective policies on climate change can be enacted at the global level, 'beyond the state'. Such perspectives take into account governance mechanisms with public, hybrid and private sources of authority. Studies are raising questions about the ways in which state authority is constituted and practiced in the climate arena, and the implications for how we understand the potential and limits for addressing the climate problem. This book focuses on the rationalities and practices by which a carbon-constrained world is represented, categorized and ordered. The book will enable investigations into a range of sites (e.g., the body, home, shopping centre, firm, city, forests, streets, international bureaucracies, financial flows, migrants and refugees) where subjectivities around climate change and carbon are formed and contested. Despite a growing interest in this area of work, the field remains fragmented and diffuse. This edited collection brings together the leading scholarship in the field to cast new light on the question of how, why, and with what implications climate governance is taking place. It is the first volume to collect this body of scholarship, and provides a key reference point in the growing debate about climate change across the social sciences"--

This book presents a vibrant study of the rise, decline, and transformation of environmental thinking. The author’s analysis moves from the proclaimed death of environmentalism toward the emerging theory and practices of postenvironmentalism in its manifold interpretations. Building upon current transformation of the relationship between science, technology, society and the environment, the book combines a theory-informed presentation of worldwide cases and crucial events in the history of environmentalism with a journey into scholarly explorations in order to answer the crucial question: where is environmental thinking heading?

Companion to Environmental Studies presents a comprehensive and interdisciplinary overview of the key issues, debates, concepts, approaches and questions that together define environmental studies today. The intellectually wide-ranging volume covers approaches in environmental science all the way through to humanistic and post-natural perspectives on the biophysical world. Though many academic disciplines have incorporated studying the environment as part of their curriculum, only in recent years has it become central to the social sciences and humanities rather than mainly the geosciences. ‘The environment’ is now a keyword in everything from fisheries science to international relations to philosophical ethics to cultural studies. The Companion brings these subject areas, and their distinctive perspectives and contributions, together in one accessible volume. Over 150 short chapters written by leading international experts provide concise, authoritative and easy-to-use summaries of all the major and emerging topics dominating the field, while the seven part introductions situate and provide context for section entries. A gateway to deeper understanding is provided via further reading and links to online resources. Companion to Environmental Studies offers an essential one-stop reference to university students, academics, policy makers and others keenly interested in ‘the environmental question’, the answer to which will define the coming century.

Companion to Environmental Studies

The Socio-Politics of Invasive Species and Infectious Diseases

Routledge Handbook of Biosecurity and Invasive Species

Wounded Planet

The Ethics and Rhetoric of Invasion Ecology

Governing the Climate

How Nature Conservation Animates Borders

This book examines how neoliberalism is constituted from multiple, diverse elements; how these elements are brought together and made to cohere; and the challenges, contestations, and consequences of such. Informed by assemblage thinking, the collection builds on research that emphasizes the forms of experimentation, adaptation, and mutation through which neoliberalism is enacted and rendered workable across different spaces. Contributors provide original case studies on topics such as democratic administration, carbon markets, the sharing economy, behavioral economics, disease management, free trade, and youth volunteering. They interrogate the forms of expertise through which neoliberalism is rendered knowable; the diverse socio-technical practices that make neoliberalism governable; and the practices, effects, and tensions involved in the assembling of neoliberal subjects.

Biological Threats in the 21st Century offers a fresh understanding of contemporary biological threats to national security. Readers are introduced to the politics, people, science and historical roots of contemporary biological threats through up-to-date, rigorous and accessible chapters written by leading academics and supplemented by expert point-of-view contributions and interviews. The book provides inspiration and resources for students and researchers, as well as policy makers in government, the public policy sector and the wider community. It is particularly pertinent for those interested in biological disarmament, non-proliferation, counterterrorism and health security. Contents:Editor's Introduction: The Politics, People, Science and Historical Roots (Filippa Lentzos)Crossing the Normative Barrier: Japan's Biological Warfare in China in World War II (Jeanne Guillemin)Past Proliferators:The British, United States and Canadian Biological Warfare Programs (Brian Balmer & John Ellis van Courtland Moon)Point of View: Open-Air Biowarfare Testing: American and British Experiences (Leonard A Cole)The Soviet Biological Warfare Program (Jens H Kuhn & Milton Leitenberg)Point of View: Life Inside the Soviet Bioweapons Program (Sonia Ben Ouagrham-Gormley)The Iraqi Biological Warfare Program (Tim Trevan)Point of View: Hunting Saddam's Biological Weapons: A First-Hand Account (Gabriele Kraatz-Wadsack)The South African Biological Warfare Program (Alastair Hay)Point of View: Open Secrets: 'Truth Telling' and Transitional Justice in Revealing Biowarfare Programs (Chandré Gould)Bioweapons in Today's Context :RISE, the Rajneeshees, Aum Shinrikyo and Bruce Ivins (W Seth Carus)Point of View: Inside the Mind of a Bioterrorist (Toby Ewin)Aftershocks of the 2001 Anthrax Attacks (Kathleen M Vogel)Point of View: The Threat of Misuse (Gigi Kwik Gronvall)Searching for Cures or Creating Pandemics in the Lab? (Nancy D Connell & Brian Rappert)Point of View: Dangerous Life Sciences Research (David R Franz)Ebola: From Public Health Crisis to National Security Threat (Nicholas G Evans)Point of View: Building a Sustainable Biodefense Industry (Jacob Thorup Cohn)Quandaries in Contemporary Biodefense Research (Gregory D Koblentz)Disarmament and Non-Proliferation:The Traditional Tools of Biological Arms Control and Disarmament (Marie Isabelle Chevrier & Alex Spelling)Witness Seminar: Origins of the Biological Weapons Convention (Jeanne Guillemin, Matthew Meselson, Julian Perry Robinson & Nicholas Sims)Interview: Unconventional Weapons and Activist Scientists (Steven Rose & Filippa Lentzos)Point of View: Responsible Science: Strategies for Engaging Key Stakeholders (Jo L Husbands)Interview: International Security and Counter-Terrorism (Trevor Smith & Filippa Lentzos)Point of View: The Front Lines of Biological Weapons Non-Proliferation (Melissa Finley & Jennifer Gaudioso)Roundtable: The Future of Biothreat Governance (Iris Hunger, Jez Littlewood, Caitriona McLeish, Piers Millett & Ralf Trapp) Readership: Students and researchers, as well as policy makers in government, the public policy sector and the wider community. It is particularly pertinent for those interested in biological disarmament, non-proliferation, counterterrorism and health security.

This book is a source of information on practical and innovative approaches to biosecurity surveillance. It explains the foundation and concepts behind surveillance design, with examples of methods and tools created to deal with surveillance challenges. With supporting case studies and including current directions in research, it covers evidence-based approaches to surveillance, statistics, detectability, single and multi-species detection, risk assessment, diagnostics, data-basing, modelling of invasion and spread, optimisation, and future climate challenges.

During July 10–13, 2011, 68 participants from 32 countries gathered in Istanbul, Turkey for a workshop organized by the United States National Research Council on Anticipating Biosecurity Challenges of the Global Expansion of High-containment Biological Laboratories. The United States Department of State's Biosecurity Engagement Program sponsored the workshop, which was held in partnership with the Turkish Academy of Sciences. The international workshop examined biosafety and biosecurity issues related to the design, construction, maintenance, and operation of high-containment biological laboratories- equivalent to United States Centers for Disease Control and Prevention biological safety level 3 or 4 labs. Although these laboratories are needed to characterize highly dangerous human and animal pathogens, assist in disease surveillance, and produce vaccines, they are complex systems with inherent risks. Biosecurity Challenges of the Global Expansion of High-Containment Biological Laboratories summarizes the workshop discussion, which included the following topics: Technological options to meet diagnostic, research, and other goals; Laboratory construction and commissioning; Operational maintenance to provide sustainable capabilities, safety, and security; and Measures for encouraging a culture of responsible conduct. Workshop attendees described the history and current challenges they face in their individual laboratories. Speakers recounted steps they were taking to improve safety and security, from running training programs to implementing a variety of personnel reliability measures. Many also spoke about physical security, access controls, and monitoring pathogen inventories. Workshop participants also identified tensions in the field and suggested possible areas for action.

Rewilding

Environmental Politics: A Very Short Introduction

Practical Tools for Plant and Food Biosecurity

On the Origins of COVID-19

Recognition, Representation, Reconciliation

Detecting and Responding to Alien Plant Incursions

Conservation after Nature

In Experiments in Skin Thuy Linh Nguyen Tu examines the ongoing influence of the Vietnam War on contemporary ideas about race and beauty. Framing skin as the site around which these ideas have been formed, Tu foregrounds the histories of militarism in the production of US biomedical knowledge and commercial cosmetics. She uncovers the efforts of wartime scientists in the US Military Dermatology Research Program to alleviate the environmental and chemical risks to soldiers' skin. These dermatologists sought relief for white soldiers while denying that African American soldiers and Vietnamese civilians were also vulnerable to harm. Their experiments led to the development of pharmaceutical cosmetics, now used by women in Ho Chi Minh City to tend to their skin, and to grapple with the damage caused by the war's lingering toxicity. In showing how the US military laid the foundations for contemporary Vietnamese consumption of cosmetics and practices of beauty, Tu shows how the intersecting histories of militarism, biomedicine, race, and aesthetics become materially and metaphorically visible on skin.

Elephants rarely breed in captivity and are not considered domesticated, yet they interact with people regularly and adapt to various environments. Too social and sagacious to be objects, too strange to be human, too captive to truly be wild, but too wild to be domesticated—where do elephants fall in our understanding of nature? In *Wildlife in the Anthropocene*, Jamie Lorimer argues that the idea of nature as a pure and timeless place characterized by the absence of humans has come to an end. But life goes on. *Wildlife* inhabits everywhere and is on the move; Lorimer proposes the concept of *wildlife* as a replacement for nature. Offering a thorough appraisal of the Anthropocene—an era in which human actions affect and influence all life and all systems on our planet—Lorimer unpacks its implications for changing definitions of nature and the politics of wildlife conservation. *Wildlife* in the Anthropocene examines rewilding, the impacts of wildlife films, human relationships with charismatic species, and urban wildlife.

Analyzing scientific papers, policy documents, and popular media, as well as a decade of fieldwork, Lorimer explores the new interconnections between science, politics, and neoliberal capitalism that the Anthropocene demands of wildlife conservation. Imagining conservation in a world where humans are geological actors entangled within and responsible for powerful, unstable, and unpredictable planetary forces, this work nurtures a future environmentalism that is more hopeful and democratic.

When faced with tackling food-borne illness, regulators have a number of competing goals. They must investigate in order to discover the source of the illness. Once the source is identified they must take action to prevent further cases of illness occurring. Finally, once the illness is under control, they may wish to take enforcement action against those responsible. *Regulating Food-Borne Illness* uses interviews and documentary analysis to examine the actions of regulators and considers how they balance these three tasks. Central to the regulators' role is the collection of information. Without information about the source, control or enforcement action cannot be taken. Investigation must therefore take place to produce the necessary information. Utilising theoretical frameworks drawn from regulation and biosecurity, *Regulating Food-Borne Illness* shows that control is prioritised, and that investigatory steps are chosen in order to ensure that the information necessary for control, rather than enforcement, is collected. This has the effect of reducing the possibility that enforcement action can be taken. The difficulty of evidence gathering and case-building in food-borne illness cases is exposed, and the author considers the methods aimed at reducing the difficulty of bringing successful enforcement action.

Although much prized in daily conversation, good listening has been almost completely ignored in that form of political conversation we know as democracy. This book examines the reasons why so little attention has been paid to the listening aspect of democratic conversation, explores the role that listening might play in democracy, and outlines some institutional changes that could be made to make listening more central to democratic processes. The focus on listening amounts to a reorientation of democratic theory and practice, providing novel perspectives on enduring themes in democracy such as recognition, representation, power and legitimacy—as well as some new ones, such as silence. Eschewing the pessimism of the 'realist' turn in democratic theory, the book shows how attention to listening can breathe life into the democratic project and help us to realise some of its objectives. Drawing on practical examples and multidisciplinary sources, the book shows how listening should be at the heart or representative and deliberative democracy rather than peripheral to them. It develops a notion of dialogic democracy based on structured, 'apophatic', listening, and meets the challenge of showing how this could be incorporated in parliamentary democracies. What should we be listening out for? This book addresses the question of political noise and uses the idea of recognition to develop an account of politics that takes us beyond the Aristotelian speaking being towards a Deweyan notion of the 'event' around which publics coalesce.

Using Life to Manage Life

The Place of Pests in a Healthy World

Cartographies of Nature

Biological Threats in the 21st Century

Dead Epidemiologists

The Probiotic Planet

A Production Chain Framework for Plant Health Risk Management in Trade

Zoonotic diseases - pathogens transmitted from animals to people - offer particularly challenging problems for global health institutions and actors, given the complex social-ecological dynamics at play. New forms of risk caused by unprecedented global connectivity and rapid social and environmental change demand new approaches. ‘One Health’ highlights the need for collaboration across sectors and disciplines to tackle zoonotic diseases. However, there has been little exploration of how social, political and economic contexts influence efforts to ‘do’ One Health. This book fills this gap by offering a much needed political economy analysis of zoonosis research and policy. Through ethnographic, qualitative and quantitative data, the book draws together a diverse number of case studies. These include chapters exploring global narratives about One Health operationalization and prevailing institutional bottlenecks; the evolution of research networks over time; and the histories and politics behind conflicting disease control approaches. The themes from these chapters are further contextualized and expanded upon through country-specific case studies - from Kenya, Zambia, Nigeria, Ghana and Sierra Leone - exploring the translation of One Health research and policy into the African context. This book is a valuable resource for academic researchers, students and policy practitioners in the areas of global health, agriculture and development.

Going beyond an individualized perspective, he poses audacious questions: What does it mean that patients are poor or uninsured and cannot afford suggested medicines? How can we deal with the air and water pollution that are producing a patient's illness? How do we respond to patients complaining about the safety and quality of drinking water in their neighborhood? Touching on infectious and noncommunicable diseases, as well as food, medicine, and water, Wounded Planet transcends the limited vision of mainstream bioethics to compassionately reveal how healthcare and medicine must take a broad perspective that includes the social and environmental conditions in which individuals live.

Quantitative Approaches