

Environmental Change, Adaptation, and Security

Edited by

S. C. Lonergan

NATO ASI Series

Environmental Change Adaptation And Security

Linda Sygna, Karen O'Brien, Johanna Wolf

Environmental Change Adaptation And Security:

Environmental Change, Adaptation, and Security S. Lonergan, 2012-12-06 The chapters in this volume are edited versions of papers presented at the NATO Ad vanced Research Workshop on Environmental Change Adaptation and Security held in Budapest Hungary from October 16 18 1997 As is evident in this volume the papers ranged from descriptions of environmental and health issues in Russia and Eastern Europe to models of sustainable land use This diversity of perspectives on environ ment and security is indicative of both the breadth of this new area of research as well as the varied background of the researchers involved The discussions at the NATO workshop were remarkably animated and exciting not surprising given the interest in the topic I think this vitality is reflected in the papers in this volume as well The main purpose of the NATO ARW is to foster research links among researchers from NATO countries and Central and Eastern European States Russia and the Newly Independent States In editing this volume a decision was made to keep to the spirit of this purpose and if at all possible include all papers prepared for the workshop This required extensive editing and rewriting of some of the papers and consequent delays in production A determination was made early in the process by the workshop steering committee that the value of publishing the entire collection of articles out weighed the advantages of accepting only Biosaline Agriculture as a Climate Change Adaptation for Food Security Redouane a limited number Choukr-Allah, Ragab Ragab, 2023-02-27 This book presents recent research work on Biosaline Agriculture presented during First International Forum on Biosaline Agriculture in Laayoune Morocco from May 3rd to May 4th 2019 The aim of this book is to showcase the global potential of Biosaline agriculture provide an update on the development of recent innovations in the field of Biosaline agriculture the best management practices to safely use brackish and saline water highlight the use of non conventional water in marginal environment production and the current advanced technologies of desalination of brackish and seawater The different chapters will also discuss solutions that are adapted to local conditions as part of a sustainable development perspective The book provides up to date technical and scientific data on growing crops under marginal environment so as to encourage the dissemination of this knowledge in the best practices to increase the productivity in Biosaline agriculture in view of the potential to contribute to food security The book is expected to stimulate interest in the non conventional water resources and crops among junior and senior researchers and among those who are increasingly focused on exploiting marginal environments It will also be of interest to decision makers and the public and private sectors to jointly address the issues of food security especially of the poor and vulnerable people living in marginal environments worldwide by providing innovative technology transfer Environmental Challenges in the Mediterranean 2000-2050 Antonio Marquina Barrio, 2004-02-29 This book addresses six key factors that will affect environmental policies in the Mediterranean region during the next fifty years population growth climate change soil erosion and desertification water scarcity food production and urbanization and pollution The authors assess these as potential sources of violent conflict The

interdisciplinary approach makes this a relevant and useful reference for a broad range of professionals specialists and Water Conservation and Resilience: Improve Climate Change Adaptation and Water Security by researchers Strengthening Water Governance, Urban Water Systems, and Sustainable Water Management Robert C. Brears, Water Conservation and Resilience addresses the urgent challenges of climate change water scarcity and sustainability by providing actionable insights into building resilient water systems This book explores how improving water governance promoting sustainable water management and strengthening urban water systems can secure long term water security and climate resilience Understand how climate change impacts water security and what strategies enhance resilience in diverse regions Learn how sustainable water management supports long term environmental and economic stability Explore effective water governance frameworks that improve transparency coordination and accountability Gain insight into water conservation practices that reduce demand and protect natural ecosystems See how urban water systems can be designed for greater resilience against droughts floods and infrastructure stress Familiarize yourself with water pricing models that promote equity and efficiency in water use Understand the role of public private partnerships in funding resilient water infrastructure Learn how integrating circular economy principles into water systems enhances resource efficiency and sustainability This book is essential for professionals focused on water conservation climate change adaptation and sustainable water management It supports your efforts to enhance water security and resilience in a world facing growing environmental pressures Coping with Global Environmental Change, Disasters and Security Hans Günter Brauch, Úrsula Oswald Spring, Czeslaw Mesjasz, John Grin, Patricia Kameri-Mbote, Béchir Chourou, Pál Dunay, Joern Birkmann, 2011-02-03 Coping with Global Environmental Change Disasters and Security Threats Challenges Vulnerabilities and Risks reviews conceptual debates and case studies focusing on disasters and security threats challenges vulnerabilities and risks in Europe the Mediterranean and other regions It discusses social science concepts of vulnerability and risks global regional and national security challenges global warming floods desertification and drought as environmental security challenges water and food security challenges and vulnerabilities vulnerability mapping of environmental security challenges and risks contributions of remote sensing to the recognition of security risks mainstreaming early warning of conflicts and hazards and provides conceptual and policy conclusions Environmental Change and Human Security in Africa and the Middle East Mohamed Behnassi, Katriona McGlade, 2017-01-17 This volume brings together insights on the interactions between environmental change and human security in the Middle East and Africa These regions face particular challenges in relation to environmental degradation the decline of natural resources and consequent risks to current and future human security The chapters provide topical analysis from a range of disciplines on the theory discourse policy and practice of responding to global environmental change and threats to human security Case studies from Morocco Tunisia Egypt Turkey Iraq and Syria provide empirical evidence with a focus section dedicated to the critical issue of water resources and water security in the

region The contributions demonstrate above all that the risks posed to human security arise through multiple and interconnected processes operating across diverse spatial and temporal scales The complexity of these processes requires new ways of thinking and intervening As a contribution the current volume provides engaging insights from theory and practice for those seeking to address the challenges of environmental change Climate Change, Sustainable **Development, and Human Security** Dhirendra K. Vajpeyi,2013-09-26 This anthology of scholarly essays on climate change sustainable development and human security presents a comprehensive analysis of severe global warming and its potential to impact all aspects of human life and security It has been observed that climate change will most drastically impact poor tropical regions of the world for various reasons. The main focus of this collection of essays is to analyze the pro and cons of the global warming and climate change debate among scholars policymakers and scientists as well as to examine the potential adverse impact of global warming climate change on social and economic development and human security food health immigration etc Much controversy exists on the topic and many scientific reports issued by think tanks United Nations groups of scientists NGOs environmentalists and policymakers are concerned about it An extensive discussion and review of literature sets the tone and framework for the volume and facilitates the volume s analyses of the relationship between prevailing climate change global warming models and their ability to provide us information on the topic Exclusion of North America is deliberate included are case studies from countries in Asia Latin America Europe Russia and the Middle East

Food Security and Climate Change Shyam Singh Yadav, Robert J. Redden, Jerry L. Hatfield, Andreas W. Ebert, Danny Hunter, 2019-02-26 This book looks at the current state of food security and climate change discusses the issues that are affecting them and the actions required to ensure there will be enough food for the future By casting a much wider net than most previously published books to include select novel approaches techniques genes from crop diverse genetic resources or relatives it shows how agriculture may still be able to triumph over the very real threat of climate change Food Security and Climate Change integrates various challenges posed by changing climate increasing population sustainability in crop productivity demand for food grains to sustain food security and the anticipated future need for nutritious quality foods It looks at individual factors resulting from climate change including rising carbon emission levels increasing temperature disruptions in rainfall patterns drought and their combined impact on planting environments crop adaptation production and management The role of plant genetic resources breeding technologies of crops biotechnologies and integrated farm management and agronomic good practices are included and demonstrate the significance of food grain production in achieving food security during climate change Food Security and Climate Change is an excellent book for researchers scientists students and policy makers involved in agricultural science and technology as well as those concerned with the effects of climate change on our environment and the food industry **Environmental Challenges in the Mediterranean** 2000-2050 Antonio Marquina, 2012-12-06 This book collects most of the contributions prepared for the NATO Advanced

Research Workshop ARW on Environmental Challenges in the Mediterranean 2000 2050 The ARW took place in Madrid from 2 to 5ofOctober 2002 Scholars and researchers from North and South ofthe Mediterranean and other countries from NATO gathered in Madrid for discussing several important factors that could affect Mediterranean security in the next 50 years In this regard the first chapter presents the different debates regarding environmental security that took place in the last decade This chapter is an introductory chapter and takes into account the possible audience in the Southern Mediterranean and the wishes of some contributors For this reason the chapter deals in extenso with the question of human security and the different approaches The ARW dealt with issues that may affect the supply of fundamental goods for human living To this end the complex question of climate change its impact in the Mediterranean the predicted increase in temperatures and predictions about rainfall are analysed As part of this approach a chapter about solar variability and climate change is also Climate Change, Human Security and Violent Conflict Jürgen Scheffran, Michael Brzoska, Hans Günter added Brauch, Peter Michael Link, Janpeter Schilling, 2012-05-26 Severe droughts damaging floods and mass migration Climate change is becoming a focal point for security and conflict research and a challenge for the world's governance structures But how severe are the security risks and conflict potentials of climate change Could global warming trigger a sequence of events leading to economic decline social unrest and political instability What are the causal relationships between resource scarcity and violent conflict This book brings together international experts to explore these questions using in depth case studies from around the world Furthermore the authors discuss strategies institutions and cooperative approaches to stabilize the climate society interaction Rethinking Climate Change, Conflict and Security Jan Selby, Clemens Hoffmann, 2017-10-02 Is global climate change likely to become a significant source of violent conflict and should it therefore be seen as a national security challenge Most Northern governments militaries think tanks and NGOs believe so as do many academic researchers on the grounds that increased temperatures changing precipitation patterns and rising sea levels will worsen existing social stresses especially within poor societies and marginal communities across Africa and Asia This book argues otherwise The first collection of its kind it brings together leading scholars of Anthropology Geography Development Studies and International Relations to provide a series of critical analyses of mainstream thinking on the climate security nexus It shows how policy discourse on climate conflict consistently misrepresents the causes of violence especially by obscuring its core political dimensions It demonstrates that quantitative research provides a flawed basis for understanding climate conflict linkages It argues that climate security discourse is in hoc with a range of questionable military authoritarian and developmental agendas And it reveals that the greening of global capitalism is already having violent consequences across the global South Climate change the book argues does indeed have serious conflict and security implications but these are quite different from how they are usually imagined This book was published as a special issue of Geopolitics Climate Security in the Anthropocene Judith Nora Hardt, Cameron Harrington, Franziskus von Lucke, Adrien Estève, Nicholas P.

Simpson, 2023-05-20 The speed and scale of climate change presents unique and potentially monumental security implications for individuals future generations international institutions and states Long dominant security paradigms and policies may no longer be appropriate for dealing with these new security risks of the Anthropocene In response to this phenomenon this book investigates how states have reacted to these new challenges and how their different understandings of the climate security nexus might shape global actions on climate change It focuses on the perceptions framings and policies of climate security by members of the United Nations Security Council UNSC the world's highest ranking multilateral security forum Empirically the book presents detailed bottom up case studies from local authors of every UNSC member state in 2020 It combines this with an innovative theoretical approach spanning national human and ecological security that helps to capture the complex dynamics of state led approaches to dealing with security in the Anthropocene This book therefore offers readers a compelling picture of climate security politics in the UNSC beyond Council debates and resolutions By comparing and contrasting how different framings of climate security impact various policy sectors of members states the authors are able to assess the barriers and opportunities for addressing climate security locally and globally This timely contribution to the literature on climate security examines the under analysed relationship between the policy approaches of key countries at the national and at the international level Policy alignment at multiple levels of governance will be critical if we are to respond adequately to the ubiquitous challenges posed by climate change and variability Shirley Scott Head of School and Professor School of Humanities and Social Sciences UNSW Canberra at the Australian Defence Force Academy Australia Climate change is increasingly considered a problem of security yet what that means remains deeply contested Behind the rhetoric of climate crisis threats and emergencies UN Security Council members offer profoundly different ideas about what climate change and security mean and what should be done about it This book brilliantly lays out the hidden or overlooked divergences of interests and perspectives on climate security that are playing out in the world's most central security institution as it grapples with securing a climate unstable world Olaf Corry Professor of Global Security Challenges Faculty of Social Sciences School of Politics and International Studies University of Leeds United Kingdom Security is a contested concept whose scope and direction are subject to change The prime value of this volume is the systematic documentation of the dynamics in defining what security is about in reaction to ever dramatic climate change The book s focus on a somewhat representative sample of states the members of the Security Council provides robust evidence that even though many governments remain reluctant to retreat from traditional perceptions of security there is a large and growing acceptance of the need to adjust priorities in providing security in response to climate change and its consequences Michael Brzoska Professor and Senior Research Fellow IFSH Institute for Peace Research and Security Policy Universit t Hamburg Germany The climate security literature has often been labelled as West centric with little recognition of knowledge production processes and different historical socio economic and political experiences of various societies in

the Global South This book goes beyond the conventional approaches to provide a whole range of perspectives on climate security reflective of diverse contextual realities covering factors such as development imperatives conflict dynamics postcolonial legacies institutional actor complexities and geopolitical contestations among others By focusing on the climate security approaches of various countries case studies at the domestic and international levels the applicability of existing climate security frameworks or lack thereof in the context of these case studies is brilliantly brought out by the chapters This book weaves together these diverse perspectives by providing a comprehensive overview of climate security related policies of countries from both Global South and Global North and their positions on climate change and security in the UNSC They reflect the varying norms interests priorities and challenges that continue to shape the climate security agenda within the UNSC as well as non UNSC platforms This book is a must read for anyone interested in gaining an in depth and invigorating understanding of the evolution of distinct climate security discourses and practices in varying contexts Dhanasree Jayaram Assistant Professor Department of Geopolitics and International Relations Manipal Academy of Higher Education MAHE India Research Fellow Centre Marc Bloch Climate Security in the Anthropocene provides a timely and compelling account of the conceptualizations of the climate security nexus and their implications By considering climate security through the lenses of national human and ecological security it provides a sophisticated account of the different dimensions involved in the UNSC debates and beyond The collection of chapters illustrating the positions of the members of the UN Security Council in 2020 not only provide an informative account but also sheds light on the challenges that the UNSC faces in dealing with climate change Maria Julia Trombetta Associate Professor in Politics and Environment School of International Studies Institute of Asia and Pacific Studies University of Nottingham Ningbo China China The book Climate Security in the Anthropocene is the first systematic assessment of climate security decision making and governance of the UN Security Council It is groundbreaking as it combines empirical bottom up case studies of perceptions and policies of different ministries and governmental agencies of UNSC member states with a novel theoretical framework contrasting different security framings and conceptions in the Anthropocene Discussing various policy sectors the study assesses barriers and opportunities and provides novel insights on multi scale responses and interactions in the climate security nexus from local to global levels connecting individuals future generations international institutions and states The book is highly recommendable for everyone interested in the emerging field of policy oriented climate security research J rgen Scheffran Professor for Integrative Geography Head of the Research Group Climate Change and Security CLISEC Center for Earth System Research and Sustainability Universit t Hamburg Germany This volume provides multifocal insights into the climate security nexus combining critical security studies and international relations theories in the age of the Anthropocene Analyzing the perceptions policies and positions of 15 UN Security Council member states this thought provoking piece demonstrates how national security human security and ecological security have advanced as conceptual innovations

Offering a rich and diverse range of empirical case studies this piece is a strong contribution to academic discourse and teaching alike Franziska M llerJunior Professor for Political Science Faculty of Business Economics and Social Sciences Universit t Hamburg Germany Sustainable Food Security in the Era of Local and Global Environmental Change Mohamed Behnassi, Olaf Pollmann, Gabrielle Kissinger, 2013-07-01 This volume discusses a broad range of vital issues encompassing the production and consumption of food in the current period of climate change All of these add up to looming momentous challenges to food security especially for people in regions where malnutrition and famine have been the norm during numerous decades Furthermore threats to food security do not stop at the borders of more affluent countries governance of food systems and changes in eating patterns will have worldwide consequences. The book is arranged in four broad sections Part I Combating Food Insecurity A Global Responsibility opens with a chapter describing the urgent necessity for new paradigm and policy set to meet the food security challenges of climate change Also in this section are chapters on meat and the dimensions of animal welfare climate change and sustainability on dietary options for mitigating climate change and the linkage of forest and food production in the context of the REDD approach to valuation of forests Part II Managing Linkages Between Climate Change and Food Security offers a South Asian perspective on Gender Climate Change and Household Food Security a chapter on food crisis in sub Saharan Africa and separate chapters on critical issues of food supply and production in Nigeria far Western Nepal and the Sudano Sahelian zone of Cameroon Part III examines Food Security and patterns of production and consumption with chapters focused on Morocco Thailand Bahrain Kenya and elsewhere The final section discusses successful innovative practices with chapters on Food Security in Knowledge Based Economy Biosaline Agriculture in the Gulf States Rice production in a cotton zone of Benin palm oil in the production of biofuel and experiments in raised bed wheat production The editors argue that technical prescriptions are insufficient to manage the food security challenge They propose and explain a holistic approach for adapting food systems to global environmental change which demands the engagement of many disciplines a new sustainable food security paradigm

Justice and food security in a changing climate Hanna Schübel, Ivo Wallimann-Helmer, 2023-08-14 The UN s Sustainable Development Goals saw the global community agree to end hunger and malnutrition in all its forms by 2030 However the number of chronically undernourished people is increasing continuously Ongoing climate change and the action needed to adapt to it are very likely to aggravate this situation by limiting agricultural land and water resources and changing environmental conditions for food production Climate change and the actions it requires raise questions of justice especially regarding food security These key concerns of ethics and justice for food security due to climate change challenges are the focus of this book which brings together work by scholars from a wide range of disciplines and a multitude of perspectives These experts discuss the challenges to food security posed by mitigation geoengineering and adaptation measures that tackle the impacts of climate change Others address the consequences of a changing climate for agriculture and food

production and how the Covid 19 pandemic has affected food security and animal welfare A Changing Environment for **Human Security** Linda Sygna, Karen O'Brien, Johanna Wolf, 2013-06-26 Environmental change presents a new context and new opportunities for transformational change This timely book will inspire new ways of understanding the relationship between environmental change and human security A Changing Environment for Human Security Transformative Approaches to Research Policy and Action both supports and informs a call for new transformative approaches to research policy and action The chapters in this book include critical analyses case studies and reflections on contemporary environmental and social challenges with a strong emphasis on those related to climate change Human thoughts and actions have contributed to an environment of insecurity manifested as multiple interacting threats that now represent a serious challenge to humanity Yet humans also have the capacity to collectively transform the economic political social and cultural systems and structures that perpetuate human insecurities These fresh perspectives on global environmental change from an interdisciplinary group of international experts will inspire readers whether students researchers policy makers or practitioners to think differently about environmental issues and sustainability. The contributions show that in a changing environment human security is not only a possibility but a choice Human Security and Climate Change in Southeast Asia Lorraine M. Elliott, Mely Caballero Anthony, 2013 This book makes an important and timely contribution to debates about the relationship between climate change and security in Southeast Asia It does so through a human security lens drawing on local and regional expertise to discuss the threats that climate change poses to human security in Southeast Asia and to show how a human security approach draws attention to the importance of adaptation and strategies for social resilience In doing so it exposes the consequences of climate change the impact on community rights and access the special problem of border areas before going on to investigate local and regional strategies for addressing the human security challenges of climate change The State of Food Security and Nutrition in the World 2018 Food and Agriculture Organization of the United Nations, United Nations International Children's Emergency Fund, World Health Organization, World Food Programme International Fund for Agriculture Development, 2018-09-12 New evidence this year corroborates the rise in world hunger, observed in this report last year sending a warning that more action is needed if we aspire to end world hunger and malnutrition in all its forms by 2030 Updated estimates show the number of people who suffer from hunger has been growing over the past three years returning to prevailing levels from almost a decade ago Although progress continues to be made in reducing child stunting over 22 percent of children under five years of age are still affected Other forms of malnutrition are also growing adult obesity continues to increase in countries irrespective of their income levels and many countries are coping with multiple forms of malnutrition at the same time overweight and obesity as well as anaemia in women and child stunting and wasting Last year's report showed that the failure to reduce world hunger is closely associated with the increase in conflict and violence in several parts of the world In some countries initial evidence showed climate related

events were also undermining food security and nutrition This year s report goes further to show that climate variability and extremes even without conflict are key drivers behind the recent rise in global hunger and one of the leading causes of severe food crises and their impact on people's nutrition and health Climate variability and exposure to more complex frequent and intense climate extremes are threatening to erode and reverse gains in ending hunger and malnutrition Furthermore hunger is significantly worse in countries where agriculture systems are highly sensitive to rainfall temperature and severe drought and where the livelihood of a high proportion of the population depends on agriculture The findings of this report reveal new challenges to ending hunger food insecurity and all forms of malnutrition There is an urgent need to accelerate and scale up actions that strengthen resilience and adaptive capacity of people and their livelihoods to climate variability and extremes These and other findings are detailed in the 2018 edition of The State of Food Security and Nutrition in the World **Energy and Environmental Security in Developing Countries** Muhammad Asif, 2021-03-02 This book presents a comprehensive account of the energy and environmental security perspectives of the developing countries To address the subject comprehensively it covers four geographically diverse clusters of developing countries from across the world The regions particularly focused on are South Asia South East Asia Sub Sahara Africa and Latin America It is a valuable contribution to the debate and policy and research activities around the subjects of energy and environmental security in the developing countries and beyond The book covers the interwoven subjects of energy security and environmental security in the context of developing countries for the first time It discusses the latest dimensions challenges and solutions around taking into account technical economic social and policy perspectives It incorporates up to date data case studies and comparative assessment This edited book has contributions from established as well as emerging scholars from around the world It benefits a wide range of stakeholders from the fields of energy environment and sustainable development It is of help to academics researchers and analysts in these fields besides having appeal for policymakers and national and international developmental organizations It also helps developing countries to learn from each other s Climate Change Adaptation in Africa Walter Leal Filho, Simane Belay, Jokasha Kalangu, Wuta experiences Menas, Pantaleo Munishi, Kumbirai Musiyiwa, 2017-03-27 This collection showcases experiences from research and field projects in climate change adaptation on the African continent It includes a set of papers presented at a symposium held in Addis Abeba in February 2016 which brought together international experts to discuss fostering African resilience and capacity to adapt The papers introduce a wide range of methodological approaches and practical case studies to show how climate change adaptation can be implemented in regions and countries across the continent Responding to the need for more cross sectoral interaction among the various stakeholders working in the field of climate change adaptation the book fosters the exchange of information on best practices across the African continent **Climate Change and Food Security** Sukanta Mondal, Pankaj Singh, Ram Lakhan Singh, 2024-11-21 The effects of climate change on food production and security

are many and varied and represent one of the biggest challenges facing humanity today As the human population increases there is increasing pressure on land availability and water resources In many staple crops warming temperatures have caused decreases in overall yields but at the same time the demand for cheaper and more sustainable food has increased This edited volume examines the effects of climate change on all aspects of food production and how this is affecting food security in many parts of the world The book presents a series of chapters which describe new technologies aimed at mitigating these effects via for example genetic modification microbial science and the introduction of new crops

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