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Innovations in Remote and Online Education by Hydrologic Scientists Bridget Mulvey 2022-12-02

Earth Observing System 1987

Environmental Health Howard Frumkin 2016-02-29 The bestselling environmental health text, with all new coverage of key topics

Environmental Health: From Global to Local is a comprehensive introduction to the subject, and a contemporary, authoritative text for students of public health, environmental health, preventive medicine, community health, and environmental studies. Edited by the former director of the CDC's National Center for Environmental Health and current dean of the School of Public Health at the University of Washington, this book provides a multi-faceted view of the topic, and how it affects different regions, populations, and professions. In addition to traditional environmental health topics—air, water, chemical toxins, radiation, pest control—it offers remarkably broad, cross-cutting coverage, including such topics as building design, urban and regional planning, energy, transportation, disaster preparedness and response, climate change, and environmental psychology. This new third edition maintains its strong grounding in evidence, and has been revised for greater readability, with new coverage of ecology, sustainability, and vulnerable populations, with integrated coverage of policy issues, and with a more global focus. Environmental health is a critically important topic, and it reaches into fields as diverse as communications, technology, regulatory policy, medicine, and law. This book is a well-rounded guide that addresses the field's most pressing concerns, with a practical bent that takes the material beyond theory. Explore the cross-discipline manifestations of environmental health Understand the global ramifications of population and climate change Learn how environmental issues affect health and well-being closer to home Discover how different fields incorporate environmental health perspectives The first law of ecology reminds is that 'everything is connected to everything else.' Each piece of the system affects the whole, and the whole must sustain us all for the long term. Environmental Health lays out the facts, makes the connections, and demonstrates the importance of these crucial issues to human health and well-being, both on a global scale, and in our homes, workplaces, and neighborhoods.

Water Resources and Environment Miklas Scholz 2015-11-17 The 2015 International Conference on Water Resource and Environment (WRE2015) aims to provide a platform where scholars from different countries can exchange ideas, opinions and views. This book is divided into four main themes:1. Hydrology and water resources;2. Water pollution; 3. Water treatment methods, and4. Freshwater ecosystems.

Exploring to

Global Energy and Water Cycle Experiment (GEWEX) Continental-Scale International Project National Research Council 1998-07-03 Efforts to understand climate variability and predict future climate change have highlighted many aspects of the hydrologic cycle and the exchange of energy and water at the atmosphere-surface interface as areas of critically needed study. The very nature of weather and climate demands that an international perspective and a comprehensive research approach be applied to understand these important issues. In response to this need, the international partners of the World Climate Research Program developed GEWEX (Global Energy and Water Experiment) as a major focus of international study. As the first of five continental-scale experiments, the GEWEX Continental Scale International Project (GCIP) was established to quantitatively assess the hydrologic cycle and energy fluxes of the Mississippi River basin. GCIP focuses on understanding the annual, interannual, and spatial variability of hydrology and climate within the Mississippi River basin; the development and evaluation of regional coupled hydrologic/atmospheric models; the development of data assimilation schemes; and the development of accessible, comprehensive databases. Improved water resource management on seasonal to interannual time scales is also a key GCIP goal. This book reviews the GCIP program, describes progress to date, and explores promising opportunities for future progress.

Earth Observing System: From pattern to process, the strategy of the earth observing system 1987

Fiscal Year 2000 Climate Change Budget Authorization Request United States. Congress. House. Committee on Science. Subcommittee on Energy and Environment 1999

HMMR 1987

Global biogeochemical cycles Butcher 1992-08-12 Global biogeochemical cycles

Principles of Water Resources Thomas V. Cech 2009-08-24 With all new and updated material, the third edition provides civil engineers with a complete history of water availability. It also delves into government development, management, and policy of water usage. New information is included on international water issues, water measurement, and telemetry. Additional details are also presented on global warming and its impact on water resources. In addition, environmental engineers will gain a current understanding of the field through updated case studies and images that make the material more relevant.

Earth Observation of Ecosystem Services Domingo Alcaraz-Segura 2013-11-12 A balanced review of differing approaches based on remote sensing tools and methods to assess and monitor biodiversity, carbon and water cycles, and the energy balance of terrestrial ecosystem. Earth Observation of Ecosystem Services highlights the advantages Earth observation technologies offer for quantifying and monitoring multiple ecosystem fun

FRIEND 2002 Henny A. J. van Lanen 2002 Fourth international conference on FRIEND, Cape Town, March 2002.

The United Nations World Water Development Report 3 World Water Assessment Programme, 2012-05-23 The United Nations World Water Development Report, published every three years, is a comprehensive review providing an authoritative picture of the state of the world's freshwater resources. It offers best practices as well as in-depth theoretical analyses to help stimulate ideas and actions for better stewardship in the water sector. It is the only report of its kind, resulting from the collaboration and contributions of the 26 UN agencies, commissions, program, funds, secretariats and conventions that have a significant role in addressing global water concerns. The news media are full of talk of crises - in climate change, energy and food and troubled financial markets. These crises are linked to each other and to water resources management. Unresolved, they may lead to increasing political insecurity and conflict. Water is required to meet our fundamental needs and rising living standards and to sustain our planets fragile ecosystems. Pressures on the resource come from a growing and mobile population, social and cultural change, economic development and technological change. Adding complexity and risk is climate change, with impacts on the resource as well as on the sources of pressure on water. The challenges, though substantial, are not insurmountable. The Report shows how some countries have responded. Progress in providing drinking water is heartening, with the Millennium Development Goal target on track in most regions. But other areas remain unaddressed, and after decades of inaction, the problems in water systems are enormous and will worsen if left unattended. Leaders in the water sector can inform decisions outside their domain and manage water resources to achieve agreed socioeconomic objectives and environmental integrity. Leaders in government, the private sector and civil society determine these objectives and allocate human and financial resources to meet them. Recognizing this responsibility, they must act now! Two volume set: 336 + 96 pages (case studies). Includes CD-ROM. Published jointly with UNESCO Publishing.

Principles of Terrestrial Ecosystem Ecology F. Stuart Chapin, III 2002-08-12 Features review questions at the end of each chapter; Includes suggestions for recommended reading; Provides a glossary of ecological terms; Has a wide audience as a textbook for advanced undergraduate students, graduate students and as a reference for practicing scientists from a wide array of disciplines

Hydrology M. Robinson 2017-02-15 The book comprises nine chapters, with seven core chapters dealing in detail with the basic principles and processes of the main hydrological components of the water cycle: precipitation, interception, evaporation, soil water, groundwater, streamflow and water quality. It takes a broadly non-mathematical approach, although some numeracy is assumed particularly in the treatment of evaporation and soil water. The introductory and concluding chapters show the relations and interactions between these components, and also put the importance of water into a wider human context – its significant role in human history, its key role today, and potential role in future in the light of climate change and increasing global population pressures. The book is thoroughly up-to-date, contains over 100 diagrams and photographs to explain and amplify the concepts described, and contains over 750 references for further study.

Zero Emission Roberto C. Villas-Bôas and James Randall Khan A comprehensive discussion on what "zero emission" means and how to obtain it.

Aerosol Pollution Impact on Precipitation Zev Levin 2008-10-07 Life on Earth is critically dependent upon the continuous cycling of water between oceans, continents and the atmosphere. Precipitation (including rain, snow, and hail) is the primary mechanism for transporting water from the atmosphere back to the Earth's surface. It is also the key physical process that links aspects of climate, weather, and the global hydrological cycle. Changes in precipitation regimes and the frequency of extreme weather events, such as floods, droughts, severe ice/snow storms, monsoon fluctuations and hurricanes are of great potential importance to life on the planet. One of the factors that could contribute to precipitation modification is aerosol pollution from various sources such as urban air pollution and biomass burning. Natural and anthropogenic changes in atmospheric aerosols might have important implications for precipitation by influencing the hydrological cycle, which in turn could feed back to climate changes. From an Earth Science perspective, a key question is how changes expected in climate will translate into changes in the hydrological cycle, and what trends may be expected in the future. We require a much better understanding and hence predictive capability of the moisture and energy storages and exchanges among the Earth's atmosphere, oceans, continents and biological systems. This book is a review of our knowledge of the relationship between aerosols and precipitation reaching the Earth's surface and it includes a list of recommendations that could help to advance our knowledge in this area.

Global Change Michael B. McElroy 1983

Environmental Science Frank R. Spellman 2013 Environmental Science: Principles and Practices provides the scientific principles, concepts, applications, and methodologies required to understand the interrelationships of the natural world, identify and analyze environmental problems both natural and manmade, evaluate the relative risks associated with these problems, and examine alternative solutions (such as renewable energy sources) for resolving and even preventing them. Frank R. Spellman and Melissa Stoudt introduce the science of the environmental mediums of air, water, soil, and biota to undergraduate students. Interdisciplinary by nature, environmental science embraces a wide array of topics. Environmental Science: Principles and Practices brings these topics together under several major themes, including 1.How energy conversions underlie all ecological processes 2.How the earth's environment functions as an integrated system 3.How human activities alter natural systems 4.How the role of culture, social, and economic factors is vital to the development of solutions 5.How human survival depends on practical ideas of stewardship and sustainability Environmental Science: Principles and Practices is an ideal resource for students of science in the classroom and at home, in the library and the lab.

Cities of the Future Vladimir Novotny 2007-09-04 This book is developed from and includes the presentations of leading international experts and scholars in the 12-14 July, 2006 Wingspread Workshop. With urban waters as a focal point, this book will explore the links between urban water quality and hydrology, and the broader concepts of green cities and smart growth. It also addresses legal and social barriers to urban ecological sustainability and proposes practical ways to overcome those barriers. Cities of the Future features chapters containing visionary concepts on how to ensure that cities and their water resources become ecologically sustainable and are able to provide clean water for all beneficial uses. The book links North American and Worldwide experience and approaches. The book is primarily a professional reference aimed at a wide interdisciplinary audience, including universities, consultants, environmental advocacy groups and legal environmental professionals.

Encyclopedia of Natural Resources - Land - Volume I Yeqiao Wang 2014-07-23 With unprecedented attention on global change, the current debate revolves around the availability and sustainability of natural resources and how to achieve equilibrium between what society demands

from natural environments and what the natural resource base can provide. A full understanding of the range of issues, from the consequences of the changing resource bases to the degradation of ecological integrity and the sustainability of life, is crucial to the process of developing solutions to this complex challenge. Authored by world-class scientists and scholars, *The Encyclopedia of Natural Resources* provides an authoritative reference on a broad spectrum of topics such as the forcing factors and habitats of life; their histories, current status, and future trends; and their societal connections, economic values, and management. The content presents state-of-the-art science and technology development and perspectives of resource management. Written and designed with a broad audience in mind, the entries clearly elucidate the issues for readers at all levels without sacrificing the scientific rigor required by professionals in the field. Volume I – Land includes 98 entries that cover the topical areas of renewable and nonrenewable natural resources such as forest and vegetative; soil; terrestrial coastal and inland wetlands; landscape structure and function and change; biological diversity; ecosystem services, protected areas, and management; natural resource economics; and resource security and sustainability. Natural resources represent such a broad scope of complex and challenging topics that a reference book must cover a vast number of subjects in order to be titled an encyclopedia. *The Encyclopedia of Natural Resources* does just that. The topics covered help you face current and future issues in the maintenance of clean air and water as well as the preservation of land resources and native biodiversity. Also Available Online This Taylor & Francis encyclopedia is also available through online subscription, offering a variety of extra benefits for researchers, students, and librarians, including: Citation tracking and alerts Active reference linking Saved searches and marked lists HTML and PDF format options Contact Taylor and Francis for more information or to inquire about subscription options and print/online combination packages. US: (Tel) 1.888.318.2367; (E-mail) e-reference@taylorandfrancis.com International: (Tel) +44 (0) 20 7017 6062; (E-mail) online.sales@tandf.co.uk

Terrestrial Water Cycle and Climate Change Qihong Tang 2016-09-06 *The Terrestrial Water Cycle: Natural and Human-Induced Changes* is a comprehensive volume that investigates the changes in the terrestrial water cycle and the natural and anthropogenic factors that cause these changes. This volume brings together recent progress and achievements in large-scale hydrological observations and numerical simulations, specifically in areas such as in situ measurement network, satellite remote sensing and hydrological modeling. Our goal is to extend and deepen our understanding of the changes in the terrestrial water cycle and to shed light on the mechanisms of the changes and their consequences in water resources and human well-being in the context of global change. Volume highlights include: Overview of the changes in the terrestrial water cycle Human alterations of the terrestrial water cycle Recent advances in hydrological measurement and observation Integrated modeling of the terrestrial water cycle *The Terrestrial Water Cycle: Natural and Human-Induced Changes* will be a valuable resource for students and professionals in the fields of hydrology, water resources, climate change, ecology, geophysics, and geographic sciences. The book will also be attractive to those who have general interests in the terrestrial water cycle, including how and why the cycle changes.

Environmental Science and Technology Frank R. Spellman 2006-06-02 Designed for both professional and student use, the new Second Edition includes recent improvements in the application of new technologies and materials on the environment. It also places greater emphasis on the three environmental media of air, water, and soil and discusses how technology can be used to mitigate contamination of all three.

Upper Columbia River Basin Ecosystem Based Lands Management Plan [ID,WY,UT,MT,NV] 1997

Hydrology Ian Watson 2017-11-13 *Hydrology* covers the fundamentals of hydrology and hydrogeology, taking an environmental slant dictated by the emphasis in recent times for the remediation of contaminated aquifers and surface-water bodies as well as a demand for new designs that impose the least negative impact on the natural environment. Major topics covered include hydrological principles, groundwater flow, groundwater contamination and clean-up, groundwater applications to civil engineering, well hydraulics, and surface water. Additional topics addressed include flood analysis, flood control, and both ground-water and surface-water applications to civil engineering design.

Encyclopedia of Natural Resources - Two-Volume Set Yeqiao Wang 2014-06-01 With unprecedented attention on global change, the current debate revolves around the availability and sustainability of natural resources and how to achieve equilibrium between what society demands from natural environments and what the natural resource base can provide. A full understanding of the range of issues, from the consequences of the changing resource bases to the degradation of ecological integrity and the sustainability of life, is crucial to the process of developing solutions to this complex challenge. Authored by world-class scientists and scholars, *The Encyclopedia of Natural Resources* provides an authoritative reference on a broad spectrum of topics such as the forcing factors and habitats of life; their histories, current status, and future trends; and their societal connections, economic values, and management. The content presents state-of-the-art science and technology development and perspectives of resource management. Written and designed with a broad audience in mind, the entries clearly elucidate the issues for readers at all levels. Volume I – Land includes 98 entries that cover the topical areas of renewable and nonrenewable natural resources such as forest and vegetative; soil; terrestrial coastal and inland wetlands; landscape structure and function and change; biological diversity; ecosystem services, protected areas, and management; natural resource economics; and resource security and sustainability. In Volume II, Water includes 59 entries and Air includes 31 entries. The Water entries cover topical areas such as fresh water, groundwater, water quality and watersheds, ice and snow, coastal environments, and marine resources and economics. The Air entries cover air pollutants, atmospheric oscillation, circulation patterns and atmospheric water storage, as well as agroclimatology, climate change, and extreme events. Additional topics in meteorology include acid rain, drought, ozone depletion, water storage, and more. Natural resources represent such a broad scope of complex and challenging topics that a reference book must cover a vast number of subjects in order to be titled an encyclopedia. *The Encyclopedia of Natural Resources* does just that. The topics covered help readers face current and future issues in the maintenance of clean air and water as well as the preservation of land resources and native biodiversity.

Water Goes Round Robin Michal Koontz 2010-12 "In graphic novel format, text and illustrations describe the key stages of the water cycle"--Provided by publisher.

Water in a Changing World World Water Assessment Programme (United Nations) 2009-01-01 "The United Nations World Water Development Report", published every three years, is a comprehensive review providing an authoritative picture of the state of the world's freshwater resources. It offers best practices as well as in-depth theoretical analyses to help stimulate ideas and actions for better stewardship in the water sector. It is the only report of its kind, resulting from the collaboration and contributions of the 26 UN agencies, commissions, program, funds, secretariats and conventions that have a significant role in addressing global water concerns.

Project Earth Science William R. Veal 2011 Rev. ed. of: *Project earth science. Meteorology* / by P. Sean Smith and Brent A. Ford. c1994. *Opportunities in the Hydrologic Sciences* National Research Council 1991-01-01 Hydrology "the science of water" is central to our understanding of the global environment and its many problems. *Opportunities in the Hydrologic Sciences* explains how the science of water historically has played second fiddle to its applications and how we now must turn to the hydrologic sciences to solve some of the emerging problems. This first book of its kind presents a blueprint for establishing hydrologic science among the geosciences. Informative and well-illustrated chapters explore what we know about the forces that drive the global water system, highlighting promising research topics in hydrology's major subfields. The book offers specific recommendations for improving hydrologic education, from kindergarten through graduate school. In addition, a chapter on the basics of the science is interesting for the scientist and understandable to the lay reader. This readable volume is enhanced by a series of brief biographical sketches of past leaders in the field and fascinating vignettes on important applied problems, from the relevance of hydrology to radioactive waste disposal to the study of ancient water flows on Mars. The volume concludes with a report on current research funding and an outline of strategies for scientists and professional societies to advance the field. *Opportunities in the Hydrologic Sciences* is indispensable to policymakers in science and education, research managers in geoscience programs, researchers, educators, graduate students, and future hydrologists.

Advances in Water Resources & Hydraulic Engineering Changkuan Zhang 2010-07-28 "Advances in Water Resources and Hydraulic Engineering - Proceedings of 16th IAHR-APD Congress and 3rd Symposium of IAHR-ISHS" discusses some serious problems of sustainable development of human society related to water resources, disaster caused by flooding or draught, environment and ecology, and introduces latest research in river engineering and fluvial processes, estuarine and coastal hydraulics, hydraulic structures and hydropower hydraulics, etc. The proceedings covers new research achievements in the Asian-Pacific region in water resources, environmental ecology, river and coastal engineering, which are especially important for developing countries all over the world. This proceedings serves as a reference for researchers in the field of water resources, water quality, water pollution and water ecology. Changkuan Zhang and Hongwu Tang both are professors at Hohai University, China.

Remote Sensing of the Terrestrial Hydrologic Cycle Qihong Tang 2020-06-17 This book provides a practical introduction to remote sensing applications for detecting changes in the terrestrial water cycle and understanding the causes and consequences of these changes. Covering a wide range of innovative remote sensing approaches for hydrological study, this book contributes significantly to the knowledge base of hydrology in the Anthropocene, i.e., global change hydrology. It is an excellent reference for students and professionals in the fields of hydrology, climate change, and geography.

Remote Sensing of the Terrestrial Water Cycle Venkataraman Lakshmi 2014-12-08 *Remote Sensing of the Terrestrial Water Cycle* is an outcome of the AGU Chapman Conference held in February 2012. This is a comprehensive volume that examines the use of available remote sensing satellite data as well as data from future missions that can be used to expand our knowledge in quantifying the spatial and temporal variations in the terrestrial water cycle. Volume highlights include: - An in-depth discussion of the global water cycle - Approaches to various problems in climate, weather, hydrology, and agriculture - Applications of satellite remote sensing in measuring precipitation, surface water, snow, soil moisture, groundwater, modeling, and data assimilation - A description of the use of satellite data for accurately estimating and monitoring the components of the hydrological cycle - Discussion of the measurement of multiple geophysical variables and properties over different landscapes on a temporal and a regional scale *Remote Sensing of the Terrestrial Water Cycle* is a valuable resource for students and research professionals in the hydrology, ecology, atmospheric sciences, geography, and geological sciences communities.

Satellite Remote Sensing of Terrestrial Hydrology Christopher Ndehedehe 2022-08-16 This book highlights several opportunities that exist in satellite remote sensing of large-scale terrestrial hydrology. It lays bare the novel concept of remote sensing hydrology and demonstrates key applications of advance satellite technology and new methods in advancing our fundamental understanding of environmental systems. This includes, using state-of-the-art satellite hydrology missions like the Gravity Recovery and Climate Experiment and other multi-mission satellite systems as important tools that underpin water resources planning and accounting. This book discusses and demonstrates how the efficacy, simplicity, and sophistication in novel computing platforms for big earth observation data can help facilitate environmental monitoring and improve contemporary understanding of climate change impacts on freshwater resources. It also provides opportunities for practitioners and relevant government agencies to leverage satellite-based information in a transdisciplinary context to address several environmental issues affecting society. This book provides a general framework and highlights methods to help improve our understanding of hydrological processes and impact analysis from extreme events (e.g., droughts, floods) and climate change.

Environmental Issues and Solutions: A Modular Approach Norman Myers 2013-06-25 Focused on and organized around environmental issues, this innovative new book helps you critically evaluate possible solutions to the environmental problems we now face. The authors outline specific environmental issues and provide the scientific background to enable you to understand each issue. In order to find and apply solutions to these problems, they help you see that the problems are not insurmountable and that something can be done to achieve a sustainable future. The modular chapters provide full descriptions of each of the major environmental problems with real stories about what people are doing to tackle the resulting challenges. Available with InfoTrac Student Collections <http://goengage.com/infotrac>. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Geography for Edexcel A Level Year 2 Revision Guide Catherine Hurst 2018-09-13 *The Geography for Edexcel A Level Year 2 Revision Guide* is the most student-friendly resource the 2016 Edexcel A Level and AS Level Geography specifications - written specially to target the demands of revising for these content-heavy linear geography courses. Accessible, clear and thorough, this revision guide engages all your students. Each Student Book section is condensed into interesting, relevant single- or double-page examples. Clearly written objective open each section, setting out for students what they need to revise, using high-quality photos, maps and diagrams to aid retention of key geographical processes and information. Motivating revision activities and a focus on the exam requirements reinforce the rigorous approach.

Differentiation in Practice Carol A. Tomlinson 2003 Offers complete differentiated units of study in six core subjects, with each unit containing lesson plans, worksheets, assignments, rubrics, and other tools and strategies for teaching mixed-ability groups.

Managing Protected Areas in Central and Eastern Europe Under Climate Change Sven Rannow 2014-01-18 Beginning with an overview of

data and concepts developed in the EU-project HABIL-CHANGE, this book addresses the need for sharing knowledge and experience in the field of biodiversity conservation and climate change. There is an urgent need to build capacity in protected areas to monitor, assess, manage and report the effects of climate change and their interaction with other pressures. The contributors identify barriers to the adaptation of conservation management, such as the mismatch between planning reality and the decision context at site level. Short and vivid descriptions of case studies, drawn from investigation areas all over Central and Eastern Europe, illustrate both the local impacts of climate change and their consequences for future management. These focus on ecosystems most vulnerable to changes in climatic conditions, including alpine areas, wetlands, forests, lowland grasslands and coastal areas. The case studies demonstrate the application of adaptation strategies in protected areas like National Parks, Biosphere Reserves and Natural Parks, and reflect the potential benefits as well as existing obstacles. A general section provides the necessary background information on climate trends and their effects on abiotic and biotic components. Often, the parties to policy change and conservation management, including managers, land users and stakeholders, lack both expertise and incentives to undertake adaptation activities. The authors recognise that achieving the needed changes in behavior – habit – is as much a social learning process as a matter of science-based procedure. They describe the implementation of modeling, impact assessment and monitoring of climate conditions, and show how the results can support efforts to increase stakeholder involvement in local adaptation strategies. The book concludes by pointing out the need for more work to communicate the cross-sectoral nature of biodiversity protection, the value of well-informed planning in the long-term process of adaptation, the definition of acceptable change, and the motivational value of exchanging experience and examples of good practice.

Comprehensive Remote Sensing 2017-11-08 Comprehensive Remote Sensing covers all aspects of the topic, with each volume edited by well-known scientists and contributed to by frontier researchers. It is a comprehensive resource that will benefit both students and researchers who want to further their understanding in this discipline. The field of remote sensing has quadrupled in size in the past two decades, and increasingly draws in individuals working in a diverse set of disciplines ranging from geographers, oceanographers, and meteorologists, to physicists and computer scientists. Researchers from a variety of backgrounds are now accessing remote sensing data, creating an urgent need for a one-stop reference work that can comprehensively document the development of remote sensing, from the basic principles, modeling and practical algorithms, to various applications. Fully comprehensive coverage of this rapidly growing discipline, giving readers a detailed overview of all aspects of Remote Sensing principles and applications Contains 'Layered content', with each article beginning with the basics and then moving on to more complex concepts Ideal for advanced undergraduates and academic researchers Includes case studies that illustrate the practical application of remote sensing principles, further enhancing understanding

Hydrologic Science Priorities for the U.S. Global Change Research Program National Research Council 1999-11-04 The availability of fresh water is potentially one of the most pervasive crises of the coming century. Water-related decisions will determine the future of major ecosystems, the health of regional economies, and the political stability of nations. A vigorous program of research in hydrologic sciences can provide the basis for sound water management at local, regional, national, and international levels. The Committee on Hydrologic Science was established by the National Research Council in 1999 to identify priorities for hydrologic science that will ensure its vitality as a scientific discipline in service of societal needs. This charge will be performed principally through a series of studies that provide scientific advice on the hydrologic aspects of national program and U.S. hydrologic contributions to international programs. This first report contains a preliminary assessment of the hydrologic science content of the U.S. Global Change Research Program (USGCRP). Because this is a short and focused report, little effort is spent to reaffirm the established and successful elements of the USGCRP. In fact, the Committee generally endorses the findings of the National Research Council (NRC) report *Global Environmental Change: Research Pathways for the Next Decade* (NRC, 1998a; the so-called Pathways report) in this respect. Instead the attention here is directed toward the most critical missing hydrologic science elements in the FY2000 USGCRP. This brings the focus to the terrestrial component of the water cycle. The integrative nature of terrestrial hydrology could significantly strengthen the USGCRP.