

Hydropower Projects Environmental Social Impacts

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Environmental and Social Impact Assessment Guidelines for Small-scale Hydropower in Lao PDR - Peter-John Meynell 2014

The environmental and social impacts of large hydropower have received considerable attention in Lao PDR due to the government's policy for hydropower as one of the main platforms for economic development of the country. Whilst small-scale hydropower projects are not likely to have the same impacts as large hydropower projects, they can still have significant impacts. These guidelines were prepared as part of the CGIAR Challenge Program for Water and Food project MK14. The need for such guidelines to improve the environmental and social management and performance of small-scale hydropower development in Lao PDR, arose out of a case study carried out by LIRE (Lao Institute for Renewable Energy) on Small hydropower in Lao PDR and the subsequent focus group discussions held in August 2013.

The Large Dam Dilemma - Pu Wang 2013-10-18
Large dam construction has significant environmental and social impacts at different scales. As the largest developing country in the world, China has built about half of the world's large dams, and more are expected to be built over the next two decades to meet the country's rapidly growing demand for energy. This book summarizes and updates information about the

history, distribution, functions, and impacts of large dams, both globally and at China's national level. It then addresses the environmental and social-economic impacts of large dams in China with particular emphasis on the impacts of large dams on relocated people and associated compensation policies. Lastly, it introduces an integrated ecological and socio-economic study conducted in areas affected by dams along the Upper Mekong River, China. This book has the following three goals. The first goal is to summarize and update information on large dams globally and at China's national level (Ch. 2). We examine large dam problems from different perspectives, ranging from their spatial and temporal distributions and their environmental and social impacts, to discussions and debates centered on them. We also incorporate the results of an empirical investigation of the environmental and socio-economic impacts of large dams on the Upper Mekong River, China, and draw conclusions out of the analysis (Chs.3 & 4). Our second goal is to provide an analysis framework to help understand the environmental and social-economic impacts of dam construction and the resulting environmental degradations and social inequities at different scales (Chs.3 & 4), as well as to offer recommendations for mitigating these impacts within China's socio-political context (Ch. 5). The significant environmental effects

resulting from dam construction include damage to ecological integrity and loss of biological diversity. The most significant social consequences brought by dam projects are their negative impacts on relocated people. Our analysis framework provides approaches to help comprehensively understand these impacts. Our third goal is to provide clues and suggestions for further studies of large dam problems both globally and in China (Ch. 5). The construction of large dams is proceeding rapidly in different parts of the world despite the heated debates on whether they should be built at all. The decision-making process related to building large dams involves considerations of economic viability, environmental sustainability, and social equity. Therefore, interdisciplinary collaborations are required in large dam research and development projects in order to reconcile the interests of different stakeholders and avoid harming ecosystems, biodiversity, and human welfare. Overall, we hope our book facilitates future examinations of large dams by providing summaries of existing data and research related to large dams, and offering a framework for better understanding and analyzing their environmental and social impacts.

Summary Environmental Impact Assessment of the Proposed Fujian Mianhuatan Hydropower Project in the People's Republic of China - 1995

Balancing River Health and Hydropower Requirements in the Lancang River Basin -

Xuezhong Yu 2018-09-12

This book assesses river health in the Lancang River Basin with regard to the impacts of hydropower projects. It studies key components of the transboundary effects of Chinese dams on the Lancang River including its hydrology, sediment transport, water temperature, and fish community. It also investigates the specific impacts of hydropower on women's lives and livelihoods, and factors that influence women's participation in river health management. In closing, the lessons learned regarding environmental protection and hydropower development in the Lancang River Basin are shared, e.g. with hydropower developers and regulators in Laos.

Alternative Energy and Shale Gas Encyclopedia -

Jay H. Lehr 2016-04-20

A comprehensive depository of all information relating to the scientific and technological aspects of Shale Gas and Alternative Energy Conveniently arranged by energy type including Shale Gas, Wind, Geothermal, Solar, and Hydropower Perfect first-stop reference for any scientist, engineer, or student looking for practical and applied energy information Emphasizes practical applications of existing technologies, from design and maintenance, to operating and troubleshooting of energy systems and equipment Features concise yet complete entries, making it easy for users to find the required information quickly, without the need to search through long articles

Gender Equality and Social Inclusion Assessment of the Energy Sector - Asian Development Bank 2018-02-01

In Nepal, deeply embedded structural conditions determined by gender, caste or ethnicity, religion, language, and even geography have made access to and benefits from energy resources highly uneven. Women, the poor, and excluded groups experience energy poverty more severely. To address this imbalance, the government and other stakeholders have introduced measures to achieve greater gender equality and social inclusion. This study is an attempt to understand the factors affecting the outcomes and extent to which the initiatives have fostered gender equality and social inclusion. The study recommends measures to facilitate the distributive impact of energy sector development if Nepal is to meet its target of ensuring energy access to all.

Conservation and Development in Cambodia - Sarah Milne 2015-02-11

Written by leading authorities from Australasia, Europe and North America, this book examines the dynamic conflicts and synergies between nature conservation and human development in contemporary Cambodia. After suffering conflict and stagnation in the late twentieth century, Cambodia has experienced an economic transformation in the last decade, with growth averaging almost ten per cent per year, partly through investment from China. However this rush for development has been coupled with tremendous social and environmental change which, although positive in some aspects, has

led to rising inequality and profound shifts in the condition, ownership and management of natural resources. High deforestation rates, declining fish stocks, biodiversity loss, and alienation of indigenous and rural people from their land and traditional livelihoods are now matters of increasing local and international concern. The book explores the social and political dimensions of these environmental changes in Cambodia, and of efforts to intervene in and 'improve' current trajectories for conservation and development. It provides a compelling analysis of the connections between nature, state and society, pointing to the key role of grassroots and non-state actors in shaping Cambodia's frontiers of change. These insights will be of great interest to scholars of Southeast Asia and environment-development issues in general.

Sustainability Performance Evaluation of Renewable Energy Sources: The Case of

Brazil - João Fernando Gomes de Oliveira
2018-04-05

This book presents a unique analysis of the sustainability performance of various renewable energy sources, based on Brazilian case studies. The evaluation also covers the potential held by regions with diverse socioeconomic and environmental characteristics and how they affect the development of each source. Considering that energy is essential to sustaining and improving modern society, the answer to the current energy dilemma lies in the development of a system that comprises multiple renewable, reliable, and sustainable energy sources. Brazil, which has a predominantly renewable electricity grid, has the privilege of being home to a range of different sustainable sources, although most of its electricity comes from hydroelectric power plants. With that in mind, this book has the primary objective of developing a performance evaluation system for important renewable sources in Brazil (solar, wind, and hydro), taking into account different scenarios and investor profiles. The analysis is based on the study of sustainability indicators related to the technical, economic, social and environmental aspects of the evaluated energy systems. As the availability of renewable sources is very location-specific, the scope of this book covers two Brazilian States with distinct

characteristics. It makes it possible to determine which renewable energy source is most adequate from a sustainability perspective, and in light of the analyzed scope and investor profile.

[Social and Environmental Impacts of the James Bay Hydroelectric Project](#) - James F. Hornig
1999

The first mega-scale hydro project to be built in the sub-Arctic, capable of generating as much electricity as fifteen nuclear power plants, its impact includes disruption of vast areas in an extremely fragile ecosystem as well as displacement of native peoples and the introduction of dangerous levels of mercury into their food supply. The debate over these complex environmental issues has been further complicated by political issues stemming from the importance of the project to the economic development of Quebec and the sale of at least ten percent of the electricity generated the United States. The contributors examine core issues of the controversy both in relation to James Bay and to other large hydroelectric projects, such as the Aswan dam in Egypt and the Three Gorges dam in China. Providing insights from an unusual variety of disciplines, the authors offer important considerations that must be taken into account as Quebec assesses additional phases of hydroelectric development of the watershed east of Hudson Bay.

Contributors include Raymond B. Coppinger (Hampshire College), Bill Dale Roebuck (Dartmouth Medical School), Will Ryan (Hampshire College), Adrian Tanner (Memorial University), Stanley L. Warner (Hampshire College), Kessler E. Woodward (University of Alaska), and Oran R. Young (Dartmouth College).

[Comprehensive options assessment for electricity sector in Nepal : dialogue on dams and development in Nepal](#) - 2005

Wind Solar Hybrid Renewable Energy

System - Kenneth Eloghene Okedu 2020-02-26

This book provides a platform for scientists and engineers to comprehend the technologies of solar wind hybrid renewable energy systems and their applications. It describes the thermodynamic analysis of wind energy systems, and advanced monitoring, modeling, simulation,

and control of wind turbines. Based on recent hybrid technologies considering wind and solar energy systems, this book also covers modeling, design, and optimization of wind solar energy systems in conjunction with grid-connected distribution energy management systems comprising wind photovoltaic (PV) models. In addition, solar thermochemical fuel generation topology and evaluation of PV wind hybrid energy for a small island are also included in this book. Since energy storage plays a vital role in renewable energy systems, another salient part of this book addresses the methodology for sizing hybrid battery-backed power generation systems in off-grid connected locations. Furthermore, the book proposes solutions for sustainable rural development via passive solar housing schemes, and the impacts of renewable energies in general, considering social, economic, and environmental factors. Because this book proposes solutions based on recent challenges in the area of hybrid renewable technologies, it is hoped that it will serve as a useful reference to readers who would like to be acquainted with new strategies of control and advanced technology regarding wind solar hybrid systems

Promoting Transboundary Water Security in the Aral Sea Basin through International Law - Dinara Ziganshina 2014-10-13

Promoting Transboundary Water Security in the Aral Sea Basin through International Law addresses the current gap in the literature by moving beyond the static identification of treaties and norms to examine how these treaties and norms can work for water security in practice.

Renewable Energies for Central Asia Countries: Economic, Environmental and Social Impacts - Aldo Iacomelli 2006-01-12

New technologies will play a crucial role in the development of a market of "sustainable energy products" that should grow in a competitive way to stand against the challenge of change. This book suggests learn from Central Asian countries the potentiality of renewable in such areas as an option. The book investigates policy option for new markets for renewable technology, and it tests the economic path for the Kyoto protocol implementation.

Hydropower in the New Millennium - B.

Honningsvag 2020-12-17

The power sector has undergone a liberalization process both in industrialized and developing countries, involving market regimes, as well as ownership structure. These processes have called for new and innovative concepts, affecting both the operation of existing hydropower plants and transmission facilities, as well as the development and implementation of new projects. At the same time a sharper focus is being placed on environmental considerations. In this context it is important to emphasize the obvious benefits of hydropower as a clean, renewable and sustainable energy source. It is however also relevant to focus on the impact on the local environment during the planning and operation of hydropower plants. New knowledge and methods have been developed that make it possible to mitigate the local undesirable effects of such projects. Development and operation of modern power systems require sophisticated technology. Continuous research and development in this field is therefore crucial to maintaining hydropower as a competitive and environmentally well-accepted form of power generation.

Viet Nam - 2006

Guide for Assessing the Environmental Impact of Hydropower Stations - 1994

Assessing the Social Impact of Development Projects - Hari Mohan Mathur 2015-12-16

This book shows how social impact assessment (SIA), which emerged barely five decades ago, as a way to anticipate and manage potentially negative social impacts of building dams, power stations, urban infrastructure, highways, industries, mining and other development projects, is now widely in use as a planning tool, especially in developed countries. Although SIA has still not gained much acceptance among development planners in Asia, the situation is gradually changing. In India, SIA initially mandated as a policy guideline in 2007 is now a legal requirement. SIA in China has also recently become obligatory for certain types of development projects. Bangladesh, Laos, Nepal, Pakistan and Sri Lanka are other Asian countries that provide examples from a variety of externally funded projects illustrating the use of

social impact analysis in project planning to improve development outcomes. With contributions from an array of leading experts, this book is a valuable resource on SIA, indispensable for policymakers, planners, and practitioners in government, international development agencies, private-sector industry, private banks, consultants, teachers, researchers and students of social sciences and development studies, also NGOs everywhere, not in Asia alone.

Using Risk Analysis for Flood Protection Assessment - Martina Zeleňáková 2017-02-07
This book explores the benefits of using risk analysis techniques in the evaluation of flood protection structures, and examines the results of the environmental impact assessment for selected planned flood protection projects. The objective of the book is to propose a methodology for environmental impact assessment in water management. In more detail, flood mitigation measures are investigated with the aim of selecting the best option for the approval process. This methodology is intended to streamline the process of environmental impact assessment for structures in the field of the water management. The book's environmental impact assessment system for water management structures analyzes the respective risks for different options. The results are intended to support the selection of future projects that pose minimum risks to the environment. Comparison of alternatives and designation of the optimal variant are implemented on the basis of selected criteria that objectively describe the characteristics of the planned alternatives and their respective impacts on the environment. The proposed Guideline for environmental impact assessment of flood protection objects employs multi-parametric risk analysis, a method intended to not only enhance the transparency and sensitivity of the evaluation process, but also successfully addresses the requirements of environmental impact assessment systems in the European Union. These modifications are intended to improve the outcomes of the environmental impact assessment, but may also be applied to other infrastructure projects. The case study proves that the primary aim - to improve transparency

and minimize subjectivity in the environmental impact assessment process specific to flood protection structure projects - is met for the planned project in Kružľov, Slovakia.

**Lao People's Democratic Republic
Preparing the Cumulative Impact
Assessment for the Nam Ngum 3
Hydropower Project (financed by the Japan
Special Fund).** - Asian Development Bank 2007

Dilemmas of hydropower development in Vietnam - Ty Pham Huu 2015-01-13

Hydropower is one of the biggest controversies in Vietnam in recent decades because of its adverse environmental and social consequences, especially negative impacts on displaced people who make way for hydropower dam construction. This book explains the controversies related to hydropower development in Vietnam in order to make policy recommendations for equitable and sustainable development. The book focuses on the analysis of emerging issues, such as land acquisition, compensation for losses, displacement and resettlement, support for livelihood development, and benefit sharing from hydropower development. The analysis emphasizes the role of different stakeholders in the decision-making process for hydropower development in Vietnam as a means to find a better governance model.

Assessing the Environmental Impacts of Hydropower Projects - Robert Zwahlen 2022-01-03

This book describes the entire process of environmental impact assessment for hydropower and dam projects, not from a legal or regulatory point of view, but from a very applied one, based mainly on the personal experience of the author, who is involved in this field of work since over 40 years, by describing the different steps of such an assessment, covering all major aspects to be dealt with. The focus is on environmental issues, while the other main subject—social impacts—is mentioned here only briefly. It will be of interest not only for ESIA (Environmental and Social Impact Assessment) practitioners, be they consultants involved in the preparation of such studies or staff members of environmental protection agencies having to come to decisions based on

them, but also for engineers and planners involved in such projects, developers, and people interested in questions related to energy, environment, and climate change. Overall, this book aims at contributing to put the discussion about hydropower and dam projects on a more objective level.

Energy Economics and the Environment -

Mohammad Yonus Bhat 2020-07-31

Energy is a basic prerequisite for the growth and development of national wealth. Based on primary research, Energy Economics and the Environment integrates a network of diverse disciplines to provide a theoretical and practical understanding of the constantly neglected challenges associated with conservation, preservation and sustainability of environment and energy. It highlights the issues and prospects in safeguarding environmental biodiversity and renewable energy efficiency, ecosystem chains and human living standards. This book studies the vulnerability associated with global climate alterations that limits direct social and economic benefits from ecosystem goods and services, and presents significant methods through illustrative case studies to tackle energy and environmental questions. In its final analysis, the book proposes possible unconventional mitigation strategies to restore sustainable biodiversity of ecosystems.

Cumulative Impact Study of Lower Subansiri Hydropower Dam In India -

Dontula Sri Prapoorna 2013-01

In this work, starting from why dams are required, the various impacts that are caused due to series of dams in the same river and how these impacts affect the downstream and the importance of addressing these cumulative impacts have been discussed. The study includes how application of models can simulate some water quality scenarios and how far predicted data by these can be used for mitigation measures. Keywords: Cumulative Impact Assessment (CIA), Environmental Impact Assessment (EIA), Subansiri River, Water quality, Sedimentation, Impacts of hydropower projects, Social impact, environmental impact.

Hydropower - Hossein Samadi-Boroujeni

2012-03-09

Hydroelectric energy is the most widely used form of renewable energy, accounting for 16

percent of global electricity consumption. This book is primarily based on theoretical and applied results obtained by the authors during a long time of practice devoted to problems in the design and operation of a significant number of hydroelectric power plants in different countries. It was preferred to edit this book with the intention that it may partly serve as a supplementary textbook for students on hydropower plants. The subjects being mentioned comprise all the main components of a hydro power plant, from the upstream end, with the basin for water intake, to the downstream end of the water flow outlet.

Assessment of Energy Sources Using GIS -

Lubos Matejicek 2017-03-20

This volume is a comprehensive guide to the use of geographic information systems (GIS) for the spatial analysis of supply and demand for energy in the global and local scale. It gathers the latest research and techniques in GIS for spatial and temporal analysis of energy systems, mapping of energy from fossil fuels, optimization of renewable energy sources, optimized deployment of existing power sources, and assessment of environmental impact of all of the above. Author Lubos Matejicek covers GIS for assessment a wide variety of energy sources, including fossil fuels, hydropower, wind power, solar energy, biomass energy, and nuclear power as well as the use of batteries and accumulators. The author also utilizes case studies to illustrate advanced techniques such as multicriteria analysis, environmental modeling for prediction of energy consumption, and the use of mobile computing and multimedia tools.

Hydropower and the Environment: Summary and recommendations - International Energy Agency Implementing Agreement for Hydropower Technologies and Programmes (Annex III) 2000

Impacts of Large Dams: A Global

Assessment - Cecilia Tortajada 2012-02-02

One of the most controversial issues of the water sector in recent years has been the impacts of large dams. Proponents have claimed that such structures are essential to meet the increasing water demands of the world and that their overall societal benefits far outweigh the costs. In contrast, the opponents claim that social and

environmental costs of large dams far exceed their benefits, and that the era of construction of large dams is over. A major reason as to why there is no consensus on the overall benefits of large dams is because objective, authoritative and comprehensive evaluations of their impacts, especially ten or more years after their construction, are conspicuous by their absence. This book debates impartially, comprehensively and objectively, the positive and negative impacts of large dams based on facts, figures and authoritative analyses. These in-depth case studies are expected to promote a healthy and balanced debate on the needs, impacts and relevance of large dams, with case studies from Africa, Asia, Australia, Europe and Latin America.

Evolution of Dam Policies - Waltina Scheumann
2014-03-11

The World Commission on Dams (WCD) report (2000) "Dams and Development: A New Framework for Decision-Making" set a landmark in the ongoing controversy over large dams. Now that more than ten years have passed, one has to realize that the WCD norms matter. However, their real chance of becoming implemented relies on whether their core values, strategic priorities and guidelines are accepted by national decision-makers and are translated into official policies and practices. The book's major concern is whether the big hydropower states have improved their standards for environment and resettlement, and whether international standards are applied or exist only on paper. The introductory and synthesis chapters present the methodological approach and discuss the findings. Other chapters analyze changes in dam policies in the big hydropower states Brazil, China, India and Turkey; the role of non-governmental organizations in advocating against the Turkish Ilisu Dam project on the Tigris River; the strategies of International Rivers and World Wildlife Fund for Nature in the global hydropower game; the policies of the German government and its positioning in the dam debate, and the engagement of Chinese actors in building the Bui Dam (Ghana) and the Kamchay Dam (Cambodia).

Doing A Dam Better - Ian C. Porter 2010-12-01

This book succinctly describes how a large hydro dam in a poor country with weak capacity was

successfully prepared by a truly global development and financial partnership, by turning the natural resource curse on its head and tapping the state of the art to mitigate environmental and social impacts.

Assess the Environmental and Social Sustainability of the Three Gorges Dam Project - 2004

(Uncorrected OCR) Abstract of dissertation entitled Assess the Environmental and Social Sustainability of the Three Gorges Dam Project Submitted by Chan Ho Ying for the degree of Master of Arts at The University of Hong Kong in June 2004 The Three Gorges Dam is the world largest hydroelectric project. It is also an ambitious project that causes much concern on its impacts on the society and environment of the region. This project would benefit in flood control, hydropower generation, water supply and navigation improvement. But, it may also bring huge effects in terms of social and environmental impacts. This thesis is an attempt to examine and review the environmental and social sustainability of this dam project. In examining the environmental sustainability, the thesis focuses on the environmental risks or benefits of the project. The impacts on climate, water quality and wildlife have been studied. The dam safety issue is also investigated. As the water level will eventually rise to 175 meters, the impacts on cultural and historical heritages are reviewed as well. In evaluating the social sustainability of this project, the current state of the resettlement project is investigated. The resettlers|living condition and the employment situation in the resettled areas are reviewed. Also, the public participation and the legal protection of the resettlers have been studied. After analyzing the environmental and social sustainability of the project, it is found that the Three Gorges Dam has the potential to promote sustainable development, but the environmental and social costs make it difficult. Therefore, some alternatives are examined. It includes constructing dam of the upper reaches, nuclear power plants and dyke and channel improvement. Finally, it is concluded with some recommendations that may help to avoid unsustainable development and the government should take efforts to assure the natural, social and economic systems to interact in a

harmonious way. _____
Hydropower and the Environment: Main report - 2000

Sustainable Asset Valuation of the Kalivaç and Poçem Hydropower Projects - 2020

Managing Environmental and Social Impacts of Hydropower in Bhutan -

Weltbankgruppe 2016

Development of Bhutan's untapped hydro power resources has the potential to spur economic growth, rapidly increase export revenue, reduce poverty, and bring about sustained improvements in human development. The Royal Government of Bhutan (RGoB) has, therefore, embarked on an ambitious plan to develop the renewable hydropower resources in the country. Large hydropower plants generating 1,606 MW are already operational, and new plants with an additional capacity of 3,658 MW are under construction and expected to be commissioned by 2018 and 19. According to these plans, the RGoB will commission close to 12,600 MW of new hydropower by the end of the next decade, becoming by far the highest hydropower producer per capita in the world. The findings of this study are framed in the Bhutanese context and focus on recommendations that are relevant for Bhutan. The study has found that the main impacts of hydropower development in Bhutan relate to aquatic biodiversity and are cumulative, meaning that they are not of immediate concern but should get priority attention once the development of hydropower accelerates. This study has identified a number of gaps in the management of E&S impacts and ranked them according to relevance for Bhutan. In conclusion, despite due awareness and a good regulatory framework for managing the E&S impacts of hydropower in Bhutan, challenges remain in the upstream planning and in the implementation of the assessment and mitigation of impacts, mainly because of the lack of capacity among key government institutions to ensure quality and enforce good practices. Addressing the capacity constraints, and providing key institutions with the tools, structures, and skills necessary for proper E&S management of hydropower would benefit the sustainability of Bhutan's natural and cultural

values, as well as its hydropower and economic development.

Research Anthology on Environmental and Societal Impacts of Climate Change - Management Association, Information Resources 2021-10-29

Climate change is an issue that has been generating a significant amount of discussion, research, and debate in recent years. Climate change continues to evolve at a rapid rate and continues to have a wide array of effects on everything from temperature to plant life. Beyond the negative environmental impacts, climate change is also proving to be a detriment to society with increasingly violent natural disasters and human health effects. It is essential to stay up to date on the latest in emerging research within this field as it continues to develop. The Research Anthology on Environmental and Societal Impacts of Climate Change discusses the varied effects of climate change throughout all areas of life and provides a comprehensive dive into the latest research on key elements of society that are affected by the rapidly increasing climate. Covering a range of topics including reproduction, plants and animals, and energy demand, it is ideal for environmentalists, policymakers, environmental engineers, scientists, disaster and crisis management personnel, professionals, government officials, practitioners, upper-level students, and academics interested in emerging research on the numerous impacts of climate change.

Managing Environmental and Social Impacts of Hydropower in Bhutan - World Bank Group 2016

Hydropower Development in the Mekong Region - Nathaniel Matthews 2014-11-13

The Mekong Basin is home to some 70 million people, for whom this great river is a source of livelihoods, the basis for their ecosystems and a foundation of their economies. But the Mekong is also currently undergoing enormous social, economic, and ecological change of which hydropower development is a significant driver. This book provides a basin-wide analysis of political, socio-economic and environmental perspectives of hydropower development in the Mekong Basin. It includes chapters from China, Thailand, Laos, Cambodia and Vietnam. Written

by regional experts from some of the region's leading research institutions, the book provides an holistic analysis of the shifting socio-political contexts within which hydropower is framed, legitimised and executed. Drawing heavily on political ecologies and political economics to examine the economic, social, political and ecological drivers of hydropower, the book's basin wide approach illuminates how hydropower development, and its benefits and impacts, are linked multilaterally across the basin. The research in the book is derived from empirical research conducted from 2012-2013 as part of the CGIAR Challenge Program on Water and Food's Mekong programme.

Turning Hydropower Social - Anders Hjort-af-Ornas 2007-12-13

As this book demonstrates, it is essential to involve stakeholders in assessments of hydropower development. The author targets policy formation after the UNCED and UNSSD conventions. By drawing on some dozen project cases, the author shows how policy changes have gradually influenced project design and implementation. Readers gain new insights into the reality behind hydropower policy changes as they have evolved over the last decade.

Managing Social Risks and Impacts from Hydropower Development - Phan Huyen Dan 2020

The Trung Son dam is a medium-sized hydropower dam (260 megawatts) that was developed with the aim of achieving social and environmental sustainability. Experience gained from the Trung Son Hydropower Project can provide relevant information for dam projects of a similar size. This report is the result of a knowledge-sharing exercise conducted at the end of 2019 by the World Bank with Trung Son Hydropower Company Limited (TSHPCo) participation. The project benefitted from a decision-making process based on an adaptive management principle, defined by a framework of measures and implementation process. Detailed activities can evolve if they remained consistent with this framework. Experience gained from the Trung Son Hydropower Project demonstrates how relocation evolved, requiring continuous negotiations and engagement of all stakeholders to deal with unexpected problems. The critical management of downstream impacts

during reservoir impoundment requires mitigation of specific risks. Assessed during the project preparation stage, downstream impacts associated with reservoir impoundment will be minimized through maintenance of a minimum environmental flow. The Trung Son reservoir area is rapidly evolving, with a newly created infrastructure network bringing both opportunities and challenges. To further provide support to local households and their communities, the scope of the corporate social responsibility of TSHPCo will need to be confirmed, and interaction with the local government is likely to continue over a long period of time.

Sustainable Hydropower in West Africa - Amos Kabo-Bah 2018-01-10

Sustainable Hydropower in West Africa: Planning, Operation, and Challenges provides a comprehensive overview of the planning, deployment and management of hydropower in West Africa and similar regions. The authors use a practical approach to analyze available technology, modeling methodologies and sustainability aspects, such as the dependence between climate and hydropower, and socio-economic and environmental impacts. They discuss the need for innovative solutions and how to close research gaps in the field for this region. Although more than 50% of West Africa's hydropower potential is still untapped, re-engineering and maintenance of existing hydropower plants is a key issue and is discussed. Issues of productivity and optimization are also covered, as well as the introduction of new technology and integration of hydropower into existing energy systems—renewable energy systems, in particular. Policy and regulation are also examined, considering competing needs when managing water resources. The final chapter offers a summary of activities, strategies, policies and technology for easy reference and practical use. Due to its wide coverage and real life examples, this is a useful reference for engineering professionals in the field of hydropower, working in West Africa and regions with similar conditions. This book helps engineers make technology and location decisions for planning, deploying and operating hydropower plants. The book's accessible

language and international authorship also allows for easy use by energy researchers, analysts and policy makers who need information for the analysis, modeling, financing, implementation and regulation of hydropower in West Africa and related regions. Presents the most current issues related to hydropower deployment and management in West Africa and regions with similar conditions. Discusses key challenges, focusing on practical

aspects and methodologies. Explores the technological, sustainability and economic aspects to be considered when deploying, operating and maintaining hydropower plants in West Africa and similar regions.

Hydropower Development in Vietnam Social and Environmental Policies, Practices, and Impacts Past, Present, and Future - Nga Dao
2002