

**Making New Environmental
Knowledges: EIAs and Public Hearings
on Large Dams in Northeast India**

Manju Menon

**Thesis submitted in fulfillment of
Doctor of Philosophy
Faculty of Arts and Social Sciences
University of Technology Sydney**

January 2020

CERTIFICATE OF ORIGINAL AUTHORSHIP

I, Manju Menon declare that this thesis is submitted in fulfilment of the requirements for the award of Doctor of Philosophy in the Faculty of Arts and Social Sciences at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

This research is supported by the Australian Government Research Training Program.

Production Note:

Signature removed prior to publication.

Manju Menon

Date: 11.1.2020

ACKNOWLEDGEMENTS

I owe a huge debt of gratitude and thanks to my supervisor Prof. Devleena Ghosh and my alternate supervisor Prof. James Goodman for their guidance, support and encouragement. The many discussions and chapter feedback sessions with them were not only valuable for this thesis but to shape my understanding of the values and purposes of academic research itself.

I owe particular thanks to Prof. Heather Goodall for her invaluable feedback and guidance on specific chapters. Her interest in my research and enthusiasm to discuss the themes related to my research were a source of much inspiration to me. I have greatly benefited from the academic mentorship of Prof. K. Sivaramakrishnan, Prof. Rohan D'Souza, Prof. Kiran Asher, Prof. Mahesh Rangarajan and Prof. Duncan McDuie-Ra. Their guidance helped me develop my approach to academic research. I am very grateful for their support.

I learned a lot from the many workshops and seminars hosted at FASS, UTS. The discussions at these workshops helped immensely to shape ideas and conceptual frameworks for this thesis. I feel lucky to have been at UTS when the Climate Justice Centre was being set up. It was an intellectual home for me even before it came into existence. To the wonderful 'coal-rush' project team - Stuart Rosewarne, Linda Connor, Tom Morton, Jon Marshall, Rebecca Pearse, Katja Muller and Ashwin Thomas a huge thank you for your friendship and for all the inspiration. It was exciting to have these multiple 'research' pots cooking.

This thesis would not have been possible without the scholarships from UTS and I am very grateful for the support. The University's flexible study program helped me find my own learning pace and style. I thank the research training faculty at the University for nurturing our cohort through useful orientation sessions on research planning and writing skills.

I benefited a lot from the wisdom and experience of friends and colleagues during my work as a campaigner in Northeast India. My admiration for their work has only grown through these years as I revisited the range of knowledge outputs produced by

them on environmental and development challenges in this region. Though it is impossible to name them all here, I would like to thank a few friends and colleagues for helping me understand the governance complexities on large dams and Northeast India. Neeraj Vagholikar, Ashish Kothari, Bittu Sahgal, Dr. Goutam Narayan, Nandita Hazarika, Dr. Asad Rahmani, Himanshu Thakkar, Walter Fernandes, Ritwick Dutta, Shekhar Singh, Dr Anwaruddin Choudhury, Sanjoy Barbora, W. Ramananda, Roy Laifungbam, Raju Mimi, Tone Mickrow and friends in the Dibang valley, Mr. K.Krong, Dr. Tayang and friends in the Lohit valley, Bamang Anthony, Jarjum Ete, Dr. G. N Sinha and Tomi Ete in Itanagar, Tseten Lepcha, Dawa Lepcha and Raman Shreshtha in Sikkim, Ravindranath and the RVC crew, Bikul Goswami, Bhaskar Bora and friends in Dhemaji and Lakhimpur, Firoz Ahmed, Bibhuti Prasad and Bibhab Talukdar at Aaranyak, Prof. Dulal Goswami and Dr. Partha Jyoti Das at Gauhati University, Imtiena Ao, Dr. Vincent Darlong, Dr. Promode Kant, Amba Jamir, Dr. Dhruvad Choudhury and members of the amazing *jhumia* research and advocacy network.

Many wonderful people looked after me during this period of thesis writing. I am grateful to Heather Goodall, Paul Torzillo and Hillary Dunn for making my stay in Sydney splendid. Watching crime serials on TV together was simply the best way to unwind after hours of thesis work. I thank Kerry Little, Deborah Nixon, Amy Thomas, Ruchira Talukdar and Mukesh Kumar for their warm friendship and talking endlessly with me about India and Australia. Many friends at Level 3 helped me navigate through the University systems and student life in Sydney. Thanks to them for all the support and for turning up at my DAs.

Three families waited patiently for me to complete my thesis. Their unconditional love and their own personal histories of struggle have been a source of strength and inspiration always. To the Kalshians, the Kohlis and my dear mob at 755, I can't thank you enough. Acha and Amma, Kal and KK, you are my heroes. I owe very special thanks Betsy, Lisa, Juno, Dorje, Devi, Missy and Smudge, for their company and cuddles. I'm grateful for all the times they found their way to my desk and stayed for a little while.

CONTENTS

CERTIFICATE OF AUTHORSHIP

ACKNOWLEDGMENTS

ACRONYMS

ABSTRACT

CHAPTER 1: NEW GEOGRAPHIES FOR CLEAN

POWER.....1-27

- 1.1 Introduction.....1
- 1.2 Research Objectives, Approaches and Methods.....5
- 1.3 Theoretical Frameworks.....8
- 1.4 Literature Review.....12
- 1.5 Analysis and Research Contribution.....17
- 1.6 Thesis Chapters.....25

CHAPTER 2: THE LARGE DAM AND ITS CRITICS.....28-53

- 2.1 Large Dams, Development and Modernity.....29
- 2.2 Social and Environmental Impacts of Large Dams.....34
- 2.3 Elusive Benefits and Systemic Unviability of Dams.....41
- 2.4 Technical Objects and Political Projects.....49
- 2.5 Conclusion.....53

CHAPTER 3: LARGE DAMS AND FRONTIER

DEVELOPMENT IN NORTHEAST INDIA.....54-86

- 3.1 Politics of Frontier Exceptionalism and
the Production of 'Difference'55
- 3.2 Territorial Borders and the Politics of Securitization.....63
- 3.3 The Politics of Regional Underdevelopment
and Resource Abundance.....72
- 3.4 Neoliberal Environments.....77
- 3.5 Conclusion.....85

CHAPTER 4: PARTICIPATORY

ENVIRONMENTAL GOVERNANCE:

A SITE FOR REFLEXIVE DEVELOPMENT.....87-118

- 4.1 PEG and the Transnationalization of Development87
- 4.2 PEG and the Politicization of Development in India94
- 4.3 PEG and Neoliberal Development in India.....100
- 4.4 A Site for Reflexive Development.....116
- 4.5 Conclusion.....117

CHAPTER 5: EIAs: THE EPISTEMIC MACHINERY

OF ENVIRONMENTAL KNOWLEDGE PRODUCTION.....119-139

- 5.1 The Legitimizing Effect of EIAs.....121
- 5.2 Manufacturing a Region of Deficits.....126
- 5.3 The Technicalization of Water.....128
- 5.4 Environmental Managerialism.....130
- 5.5 Creating Commensurability.....134
- 5.6 Reflexivity in EIA.....137
- 5.7 Conclusion.....139

CHAPTER 6: HYDROPUBLICS IN

ARUNACHAL PRADESH.....140-161

- 6.1 Public Hearings for Northeast Dams.....142
- 6.2 Tactics to Control Public Hearing outcomes.....151
- 6.3 Strategies to Expand the Public Sphere.....156
- 6.4 Conclusion.....160

CHAPTER 7: PEG AND SUSTAINABILITY

DEBATES IN ARUNACHAL PRADESH.....162-188

- 7.1 A Mixed Moment of Development.....163
- 7.2 Negotiations and Deal Making on Land.....165
- 7.3 Developmental Cost- Benefit Debates.....175
- 7.4 Framework for Indigenous economies.....182
- 7.5 Conclusion.....188

CHAPTER 8: PUBLIC SPHERE OF OPPOSITION IN DOWNSTREAM ASSAM.....	189-216
8.1 People of the Shadow Zone.....	190
8.2 Rivers and Resistance.....	193
8.3 Ecological Communities.....	210
8.4 Conclusion.....	215
 APPENDICES.....	 217-223
1. Northeast States and their governance arrangements	
2. Details of Projects analyzed in this thesis	
3. Basin-wise and State-wise Summaries of High Ranking Projects of CEA	
4. Environment Clearance Flowchart	
5. Representations of the “Project Site” in the Lower Demwe Dam EIA Report	
6. Public Hearing Notices for Dibang Project	
7. Political Map of Northeast India	
 BIBLIOGRAPHY.....	 224-257

ACRONYMS

AASU: All Assam Students Union
ADC: Autonomous District Council
AFSPA: Armed Forces (Special Powers) Act
AGP: *Asom Gana Parishad*
AIMSU: All Idu Mishmi Students Union
AIPP: Asia Indigenous Peoples Pact
AJYCP: *Asom Jatiyatabadi Yuba-Chatra Parishad*
APSPCB: Arunachal Pradesh State Pollution Control Board
ASSOCHAM: Associated Chambers of Commerce and Industry of India
BOOT: Built, Own, Operate, Transfer
BNNABSS: *Beki Noi Niyrantran Aru Baan Sahajya Samiti*
CA: Compensatory Afforestation
CAT: Catchment Area Treatment
CBA: Cost Benefit Analysis
CDM: Clean Development Mechanism
CEA: Central Electricity Authority
CERC: Central Electricity Regulatory Commission
CII: Confederation of Indian Industry
CRPF: Central Reserve Police Force
CWC: Central Water Commission
DMP: Disaster Management Plan
EAC: Expert Appraisal Committee
ECMB: Environment Management Capacity Building
EIA: Environment Impact Assessment
EIS: Environment Impact Statement
EMP: Environmental Management Plan
EPA: Environment Protection Act
FICCI: Federation of Indian Chamber of Commerce and Industry
FPIC: Free, Prior, Informed Consent
GHG: Green House Gases
ICOLD: International Commission on Large Dams
IDP: Internally Displaced Persons
IMCLS: Idu Mishmi Cultural and Literary Society
IMF: International Monetary Fund
IPT: Independent People's Tribunal
IRBN: India Reserve Battalion
IRN: International Rivers Network
IUCN: International Union for Conservation of Nature
IWGIA: International Work group for Indigenous Affairs
KMSS: *Krishak Mukti Sangram Samiti*
LIFE: Lawyers Initiative for Forests and the Environment
MoEF: Ministry of Environment and Forests
MoU: Memorandum of Understanding
MW: Megawatt
NBA: *Narmada Bachao Andolan*
NCEPC: National Committee on Environmental Planning and Coordination
NEAA: National Environment Appellate Authority (NEAA)
NEC: North Eastern Council

NEEPCO: North Eastern Electric Power Corporation
NEERI: National Environmental Engineering Research Institute
NEFA: North-East Frontier Agency
NGO: Non Governmental Organisation
NGT: National Green Tribunal
NHPC: National Hydroelectric Power Corporation
NPC: National Productivity Council
NPMHR: Naga People's Movement for Human Rights
OECF: Overseas Economic Cooperation Fund
OECD: Organisation for Economic Co-operation and Development
PAF: Project Affected Family
PCB: Pollution Control Board
PEG: Participatory Environmental Governance
PESA: Panchayati Raj (Extension to Scheduled Areas) Act
PPA: Power Purchase Agreement
PRI: Panchayati Raj Institutions
RoR: River of the River
R&R: Rehabilitation and Resettlement
RTI: Right to Information
SANDRP: South Asia Network of Dams, Rivers and People
SEIAA: State Environmental Impact Assessment Authority
SSP: Sardar Sarovar Project
ST: Scheduled Tribe
STF: Special Task Force
STS: Science and Technology Studies
TA: Technical Assistance
TERI: The Energy Research Institute
TMPK: *Takam Mishing Porin Kebang*
ToR: Terms of Reference
TVC: Tennessee Valley Corporation
UT: Union Territory
WCD: World Commission on Dams
WII: Wildlife Institute of India

ABSTRACT

In 2000, the Indian government envisaged the large-scale transformation of Northeast India to power India's neoliberal developmentalist project. According to the government's plan, the region was officially set to receive over 150 large, public and private sector hydropower projects with most of them to be located in the border state of Arunachal Pradesh. Despite dam building being contentious the world over, the government assumed hydropower development in this region to be frictionless. Project documents claimed that the dams would bring much needed development to this "backward" border region by utilising the "abundant" water resources of the Eastern Himalayan region and produce "clean energy".

However, until today, not a single one of the proposed projects has been completed. The Indian government's attempts at implementing hydroelectric projects in the Northeast region have floundered upon choppy waters. How did the central government seek to implement its seemingly foolproof developmentalist vision in this region and why did it fail? Looking back on the period from 2000, I focus on the government's hype, the knowledge-making practices of the public and private sector dam builders and the failed environmental regulation procedures. By analyzing the contestations around the proposed hydropower dams in this region, I argue that the Environmental Impact Assessment (EIA) a technocratic tool and the cornerstone of India's participatory environmental governance system, is neither successful as a consent manufacturing mechanism nor as a tool to manage expectations and conflicts. Instead, it acts as a legitimating device that helps make visible power relations, and thereby is generative of opposition and political participation. In this sense, EIAs succeed because they fail for their sponsors.

My thesis uses the political ecology approach to theorize the role of Participatory Environmental Governance (PEG) in contentious development. Although legal procedures for this form of governance have been implemented in India for two decades, PEG is yet to be recognized as a credible space for negotiations between policy and politics and for producing meaningful developmental outcomes.