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ENVIRONMENTAL SECURITY AND DISASTER GOVERNANCE: GLOBAL AND INDIAN PERSPECTIVES



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Manipal Academy of Higher Education
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**ENVIRONMENTAL SECURITY AND
DISASTER GOVERNANCE: GLOBAL
AND INDIAN PERSPECTIVES**

**A Dissertation Submitted to the Department of Geopolitics and
International Relations in Partial Fulfilment for Master's Degree
in Geopolitics and International Relations**

Supervisor

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By

YASHASWINI PATEL D

June 2021



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Date: 27.06.2021

DECLARATION

I declare that the dissertation entitled **“Environmental Security and Disaster Governance: Global and Indian Perspectives”** submitted by me for the award of the degree of Master of Arts in Geopolitics and International Relations of Manipal Academy of Higher Education is my own work. The dissertation has not been submitted for any other degree of this University or any other University.

(Yashaswini Patel D)

CERTIFICATE

I recommend that this dissertation be placed before the examiners for evaluation.

(Dr. Nanda Kishor M S)

Associate Professor and Head

(Dr. Dhanasree Jayaram)

Supervisor

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ABBREVIATIONS

AADMER	ASEAN Agreement on Disaster Management and Emergency Response
AAGC	Asia Africa Growth Corridor
ACDM	ASEAN Committee on Disaster Management
ACMAD	African Centre for Meteorological Applications for Development
AU	African Union
ADB	Asian Development Bank
ADPC	Asian Disaster Preparedness Centre
ARWSP	Accelerated Rural Water Supply Programme
ASEAN	Association of Southeast Asian Nations
AU	African Union
BIMSTEC	Bay of Bengal Initiative of Multi-Sectoral Economic Cooperation
BSF	Border Security Force
CAP	Contingency Action Plan
CBD	Convention on Biological Diversity
CCA	Climate Change Adaptation
CCMNC	Cabinet Committee on Management of Natural Calamities
CDRI	Coalition for Disaster Resilient Infrastructure
CII	Confederation of Indian Industry
CIMA	Centro Internazionale in Monitoraggio Ambientale
CISF	Central Industrial Security Force
CMG	Crisis Management Group
COP	Conference of Parties
CPAC	Climate Prediction and Application Centre
CPI	Corruption Perception Index
CRC	Central Relief Commissioner
CRED	Centre for Research on the Epidemiology of Disasters
CRF	Calamity Relief Fund
CRPF	Central Reserve Police Force
CSR	Convention on Biological Diversity
DAC	Development Assistance Committee
DDMA	District Disaster Management Authority
DDMF	District Disaster Mitigation Fund
DDP	Desert Development Programme
DDRF	District Disaster Response Fund
DiRex	Disaster Relief Exercise
DMA	Disaster Management Act
DMC	Drought Monitoring Centre

DOD	Department of Defence
DPAP	Drought Prone Area Programme
DRG	Disaster Risk Governance
DRI	Disaster Risk Index
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EAS	East Asia Summit
ECLAC	Economic Commission for Latin America and the Caribbean
ECOSOC	Economic and Social Council
EFDRR	European Forum for Disaster Risk Reduction
EIA	Environmental Impact Assessment
EOC	Emergency Operations Centre
ERCC	Emergency Response Coordination Centre
ESF	Emergency Support Functions
EU	European Union
FCP	Flood Control Programme
FEWS	Flood Early Warning System
GAR	Global Assessment Report
GDP	Gross Domestic Product
GDRH	Global Disaster Risk Hotspots
GETI	Global Educational and Training Institute
GIS	Geographical Information System
GNDR	Global Network of Civil Society Organizations for Disaster Reduction
GOI	Government of India
GRAF	Global Risk Assessment Framework
GSHAP	Global Seismic Hazard Assessment Programme
HADR	Humanitarian Assistance and Disaster Relief
HDI	Human Development Index
HDR	Human Development Report
HFA	Hyogo Framework for Action
HPC	High Powered Committee
HPI	Human Poverty Index
IACNDR	Inter-American Committee on Natural Disaster Reduction
IAF	Indian Armed Forces
ICC	International Code Council
ICRC	International Committee of the Red Cross
ICT	Information and Communication Technology
IDNDR	International Decade for Natural Disaster Reduction
IGAD	Inter-Governmental Authority on Development
IGO	Inter-Governmental Organizations
IMD	Indian Metrological Department
IMF	International Monetary Fund

IONS	Indian Ocean Naval Symposium
IOR	Indian Ocean Region
IORA	Indian Ocean Rim Association
IPCC	Intergovernmental Panel on Climate Change
IR	International Relations
IRCS	Indian Red Cross Society
IRGC	Institute of Risk Governance Council
ISA	International Solar Alliance
ISDR	International Strategy for Disaster Reduction
ITBP	Indo-Tibetan Border Police
ITEC	Indian Technical and Economic Cooperation
IWDP	Integrated Wasteland Development Programme
LDC	Least Developed Countries
LLDC	Land Locked Developing Countries
MDG	Millennium Development Goals
MEA	Ministry of External Affairs
MHA	Ministry of Home Affairs
MOS	Ministry of State
NA&ED	National Afforestation & Eco-development Programme
NCCF	National Calamity Contingency Fund
NCDM	National Committee on Disaster Management
NCMC	National Crisis Management Committee
NCT	National Capital Territory
NDC	Nationally Determined Contribution
NDCC	National Disaster Coordinating Council
NDEM	National Database for Emergency Management
NDMA	National Disaster Management Authority
NDMF	National Disaster Mitigation Fund
NDRF	National Disaster Response Force
NDRF	National Disaster Response Fund
NDRRMP	National Disaster Risk Reduction and Management Plan
NEC	National Executive Committee
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organizations
NIDM	National Institute of Disaster Management
NSDI	National Spatial Data Infrastructure
OAS	Organization of American Studies
OECD	Organisation for Economic Cooperation and Development
OHS	One Health Surveillance
OIEWG	Open-ended Intergovernmental Expert Working Group
OSSO	Osservatorio Sismologico Del Suroccidente
PIDF	Pacific Islands Development Forum
PMG	Pooled Mean Group

PPP	Public Private Partnership
PPP	Purchasing Power Parity
PRI	Panchayati Raj Institutions
RIMES	Regional Integrated Multi-Hazard Warning System for Africa and Asia
RTI	Right to Information
RVI	Relative Vulnerability Index
SAADMEx	South Asian Annual Disaster Management Exercise
SAARC	South Asian Association of Regional Cooperation
SADC	SAARC Disaster Management Centre
SARS	Severe Acute Respiratory Syndrome
SCO	Shanghai Cooperation Organization
SDG	Sustainable Development Goals
SDMF	State Disaster Mitigation Fund
SDMRAF	SAARC Disaster Management Rapid Action Force
SDMC	SAARC Disaster Management Centre
SDRF	State Disaster Response Fund
SEAF	Special Emergency Assistance Fund
SEC	State Executive Committee
SEEDS	Sustainable Environment and Ecological Development Society
SFDRR	Sendai Framework for Disaster Risk Reduction
SFM	Sendai Framework Monitoring
SGRY	Sampurna Grameen Rozgar Yojana
SIDS	Small Island Developing States
SMRC	SAARC Metrological Research Centre
SSB	Sashastra Seema Bal
SSDC	Southern African Development Community
STAG	Scientific and Technical Advisory Group
TCG	Tsunami Core Group
TERI	The Energy and Resource Institute
TFEU	Treaty on the Functioning of European Union
UAE	United Arab Emirates
ULB	Urban Local Bodies
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNDRO	United Nations Disaster Relief Office
UNDRR	United Nations Office for Disaster Risk Reduction
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UNISDR	United Nations International Strategy for Disaster Reduction
UNOSSC	United Nations Office for South-South Cooperation
UNSC	United Nations Security Council

USA	United States of America
WB	World Bank
WCDRR	World Conference on Disaster Risk Reduction
WCED	World Commission on Environment and Development
WEF	World Economic Forum
WFP	World Food Programme
WTO	World Trade Organization

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ABSTRACT

Disasters such as volcanic activities, earthquakes, floods, droughts, famines and cyclones have been a part of human civilization since ancient times. Technological innovation has led to the creation of permanent assets and infrastructure that are vulnerable to disasters. The twentieth century has seen these vulnerabilities grow manifold, with massive implications for human and environmental security. A substantial amount of scientific and material evidence indicate that the loss of lives and properties has increased exponentially over the past decades. This drastic increase in the number and intensity of disasters has serious ecological impacts such as environmental degradation and loss of biodiversity, as well as human impacts in the form of loss of life, livelihoods, etc. These challenges have forced the international community to adopt an innovative approach to disaster management. Against this background, the international community declared the decade of 1990-1999 as the International Decade for Natural Disaster Reduction (IDNDR) whose main objective was to reduce the loss of life and the property damage, especially in the developing countries through international cooperation.

A review of the global scenarios on disasters was carried out in the 1990s. An assessment concluded that the economic losses due to natural disasters were increasing and this required an emphatic shift in the disaster reduction strategy. The Yokohama Strategy and the Plan of Action for a Safer World (1994) provided a landmark guidance on the disaster risk reduction. At the end of the IDNDR, International Strategy for Disaster Reduction (ISDR) was launched in 2000 by the Economic and Social Council as an inter-agency task force on disaster risk reduction. It serves as a focal point within the United Nations to promote awareness, partnership, commitment, knowledge, partnership and networking on disaster risk reduction while building on the Yokohama strategy. Despite the establishment of ISDR, the countries continued to witness devastating impacts of disasters due to which in 2005, a ten-year plan of action through “Hyogo Framework for Action 2005-2015” was agreed upon to substantially reduce disaster risk globally. It had an overarching goal to build resilience of nations by substantively reducing the disaster losses. In 2015, the Sendai Framework for Disaster Risk Reduction (SFDRR) was adopted for a period of 15 years which focuses on disaster risk reduction and management. The international organizations are the key players in implementing the agenda of SFDRR.

Nation states have made pledges and committed to the implementation of international disaster risk reduction frameworks through substantial policy changes. Alongside the global institutions, the regional organizations aim to build the regional as well as national capacities through cooperation. The role of intergovernmental organizations have led to the emergence of collective response to mitigate disasters. India has played an important role in the international institutions and regional organizations to address the challenges posed due to disasters. There is scope to understand the role of India's soft power in its disaster diplomacy. This study seeks to explore the role of international institutions in implementing disaster risk reduction strategy which is intrinsically linked to neoliberal institutionalism. It further explores the role of institutions in disaster governance and policy implementation, especially by delineating disaster-related aspects such as disaster risk reduction and disaster risk management. It attempts to review the international and regional disaster risk reduction frameworks and assess different aspects of disaster governance (policies, institutions, actors, etc.) from global, regional, national and local perspectives. The research also attempts at understanding the role of India in international and regional cooperation on disaster governance, even while assessing its national-level policies on disaster risk reduction.

The discourse on disaster governance is focused on the arrangements, role, relationship of the stakeholders involved in disaster governance. This research utilizes the existing International Relations theory to understand the regimes and the disaster governance systems. It further attempts to conceptualize the environmental security in respect to disasters and its implications for ecological security and human security. In order to understand the conceptual framework of international institutions and regional organizations on disasters, this study attempts to apply various concepts and theories to assess states' behaviour when it comes to disaster governance. It looks into India's role in contributing to global disaster governance policy formulation, and assistance as well as the application of international frameworks in India's own national disaster policy. It constructs a basis for future assessment of the international disaster risk reduction frameworks and the role of institutions and various stakeholders (both state and non-state) in implementing these frameworks.