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Critical Infrastructure Protection Programme

National Resilience Architecture and
A Comprehensive Protection Framework
For India From Global Best Practices

Dr. Padmalochan DASH

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REVIEW NOTE

Critical Infrastructure Protection Programme: National Resilience Architecture and A Comprehensive National Framework for India From Global Best Practices

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Every modern nation now rests on systems most of its citizens never see. Power grids, water supply, ports, rail networks, telecommunications, payment systems and satellite links have become so tightly connected that a failure in one can travel quickly into the others. Dr. Padmalochan Dash's Critical Infrastructure Protection Programme begins from this reality and asks a direct question: does India have a national framework equal to the risks its infrastructure now carries? The book's answer is that it does not yet, and the greater part of its ten chapters is given to explaining why, and to setting out what such a framework should look like.

The author brings to the subject long engagement with the policy and practice of protecting critical systems, and that background shows in the way the argument is built. The book is neither a purely academic survey nor a policy pamphlet. It moves from diagnosis to comparison to prescription in a deliberate sequence, and it documents its method so that readers can follow, test or challenge each step.

The opening chapters set out the problem. The author places infrastructure protection within India's long governance tradition, from Kautilya's Arthashastra to the constitutional order of 1950, and argues that protecting productive assets, trade corridors and strategic installations has always been a sovereign obligation. What has changed is the nature of infrastructure itself. It now includes digital command systems, financial clearing networks, cloud platforms and AI-driven controls, and the old separation between physical and digital assets has dissolved. Hybrid threats, which combine cyber intrusion, physical disruption and information manipulation, exploit this convergence. The book notes, for example, how the 2020 Mumbai power grid incident exposed the joint vulnerability of IT and operational technology systems.

The statement of the problem is direct. India's critical infrastructure, the author argues, remains insufficiently classified, inadequately protected and governed by fragmented mandates. There is no unified framework that recognises dependencies between sectors, no institutionalised mechanism that correlates cyber threat intelligence across sectors in real

time, and no resilience maturity framework against which preparedness can be measured. Without an agreed metric, investment follows influence rather than risk, and coordination between the Centre and the states, and between regulators, remains slow.

The middle chapters provide the analytical foundation. Chapter 4 re-imagines India's critical sectors through a twelve-cluster classification developed at the Bharat Assets Protection Institute. Chapter 5 maps threat typologies, cascading risks and sectoral fragilities. Chapter 6 applies a Dependency-Interdependency Matrix to show how interconnected systems generate compound vulnerabilities, so that a failure in one sector amplifies risk in several others. Chapter 7 treats resilience as a dynamic, adaptive capability rather than a fixed state, and it introduces the Bharat National Resilience Index (BNRI) as a twelve-domain composite instrument for measuring resilience.

Chapter 8 is the comparative heart of the book. It examines critical infrastructure protection regimes in the United States, the European Union, the United Kingdom, Australia, Canada, Japan, Singapore, Israel and the Netherlands, among others, and assesses them across institutional structure, resilience integration, regulatory interoperability, public-private coordination and threat response. The author's aim is not to copy foreign models. The guiding principle, stated early and held throughout, is to identify what can be transferred, what must be adapted, and what India must build for itself, given its federal structure, sectoral diversity and threat conditions.

The final chapters turn analysis into prescription. The book proposes the Bharat National Resilience Ecosystem as a national doctrine, operationalised through a set of institutions: a Bharat Infrastructures Protection and Critical Assets Resilience Directorate (BIPCARD) under the National Security Council; SOMA as a mandatory coordination platform; a Resilience Assessment and Synchronisation bureau (RAS) for independent audit; and Prahari as a dedicated operational force. Chapter 10 draws these elements together into formal policy prescriptions for a Critical Infrastructure Protection Act and a national Critical Infrastructure Protection Programme. The proposed framework embeds sector-cluster securitisation, BNRI-linked accountability, simulation-driven governance and public-private convergence within a single enforceable statutory structure.

Several strengths stand out. The first is coherence. The twelve-cluster classification, the dependency mapping, the resilience index and the institutional design are connected parts of one argument rather than separate proposals. The second is the insistence on measurement. By treating resilience as something that can be assessed, benchmarked and audited, the book moves the discussion from general aspiration to accountable practice. The third is its comparative breadth, which gives Indian readers a structured view of how other countries have written infrastructure protection into law, budgets and institutional culture. The fourth is

the book's all-hazards outlook, which places cyclones, floods, pandemics and climate stress within the same risk doctrine as cyber and physical attack.

The author is also clear about the limits of the work. It relies on publicly available sources, since classified data and operational protocols were not accessible, and the recommendations are offered as adaptive rather than final, recognising that threat vectors change faster than any static framework. This openness about method and scope adds to the book's credibility.

The book will be most useful to policymakers and officials concerned with national security and infrastructure governance, to regulators and sector leaders responsible for critical assets, to security and continuity professionals in public and private enterprises, and to scholars and students of national security, public policy and risk. Its detailed tables, frameworks and institutional proposals give practitioners concrete material to work with, while its comparative and conceptual chapters give researchers a foundation for further study.

Critical Infrastructure Protection Programme makes a clear case that protecting critical infrastructure must be treated as a foundational function of national sovereignty, not as a subordinate regulatory concern. It arrives at a time when India's infrastructure is growing in scale and complexity faster than the arrangements meant to protect it, and it offers a considered blueprint for closing that gap. It deserves a careful reading by anyone concerned with the security and resilience of the systems on which the nation depends.

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ABOUT THE BOOK

Critical Infrastructure Protection Programme: National Resilience Architecture and A Comprehensive National Framework – For India From Global Best Practices sets out a national resilience architecture for India and a comprehensive framework for protecting its critical infrastructure, built from global best practices and fitted to Bharat's institutions, sectors and threats. It maps threats, cascading risks and the dependencies between sectors, compares protection regimes across the world, and proposes the institutions and legislation the country needs.

ABOUT THE AUTHOR



Dr. Padmalochan Dash is a scholar-practitioner with **nearly two decades of post-doctoral experience** in teaching, research, corporate practice, consultancy, and institution building, including **founding policy think tanks**. He holds a **Ph.D. and M.Phil. in Internal Security**, as well as an **M.A. and M.Phil. in South and Southeast Asian Studies**. He has taught Political Science, Public Administration, Diplomacy, Defence Studies, and Internal Security at universities. His corporate experience spans strategy, compliance, design, planning, and supply chain security.

He writes regularly for the **national media** on questions of national interest, from security and defence to international relations. His expertise is in **critical infrastructure protection, national resilience architecture, business continuity planning, regulatory governance, and strategic communications**.



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