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Strategic Risk Management for Successful Space & Defence Programmes (4)

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RISK PROFILING FOR LONG, MEDIUM AND SHORT RANGES OF INDIAN SPACE ACTIVITIES

Abstract

Indian Space activities, mainly driven by substantial public investments, have established national relevance through focus on contributions to national development involving diverse space applications implemented through the government and private enterprises. These space activities have also gained international relevance through substantial contribution to international cooperation and provision of very cost effective and reliable launch services to 319 satellites from 33 countries. The aspirational drive of the political system and public in the modern India has also triggered additionally new goals in the field of human space flight.

Realizing that the context and implications of risk management and its strategic aspects have enormously grown in significance, a study was undertaken to identify and develop the risk profiles of key segments of Indian space activities under three different time horizons, namely the short, medium and long ranges. Taking cognizance of the unique temporal perspectives demanded of space exploration, the long range perspective in this analysis is extended to 50 years, and the medium term to 20 years, while the short range from 5 to 10 years. Risk profiling dimensions included technological, operational, regulatory, economic, socio-political, and environmental. Key concerns at international level like the recent disruptive developments in private space systems and launch capabilities, the dynamics of the space traffic growth and evolving space environment, potential for interferences and vulnerability to cyber-attacks and the legal vacuum have all been factored into the analysis.

Enriched by the inputs of some key thought leaders of Indian endeavours in Space, the paper presents, in a multi-disciplinary frame, the risks identified and an analysis of impact potentials. Recognizing unique characteristics of space ecosystem in India, the analysis brings out the dual nature of strength and vulnerability under different contextual settings which future could generate. Specifically in the Indian context, an analysis is presented on the national legislation requirements that promote better risk management and compliance needs for diversity of investments and acceleration of innovations. Best practices that served to mitigate risks over past decades are highlighted. Finally the framework for a domain specific strategic risk management model is discussed for activities involving outer space.