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Sommario/riassunto

"Today's defense resource planners face unprecedented uncertainty. The planning processes currently used to determine what forces and capabilities will be needed to address future threats to our national security and interests may be vulnerable to predictive failure. To manage these risks, a new approach to planning is needed to identify strategies that perform well over a wide range of threat and funding futures and thus are better able to manage surprise. This report describes how robust decision making (RDM) may help address this need. RDM, a quantitative decision support methodology for informing decisions under conditions of deep uncertainty and complexity, has been applied to many policy areas in the last decade. This document provides a proof of concept application of RDM to defense planning, focusing on the air-launched munitions mix challenge. The study embeds a fast-running "weapons on targets" allocation model within a "scenario generator" that explores many thousands of plausible, future 20-year series of military campaigns. The RDM analysis uses these simulation models to stress-test alternative munitions mix strategies against many plausible futures. The analysis then identifies a robust munitions mix strategy, which interestingly depends not only on the desired portfolio of alternative weapons types but also on the rules used to replenish depleted weapons stocks after each campaign. The study also suggests how RDM might best be integrated into current DoD planning processes and some of the challenges that might be involved." --Back cover.