1. Record Nr.   UNINA9910255028803321

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   Titolo   Economic consequence analysis of disasters : the E-CAT software tool
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   Pubbl/distr/stampa   Singapore : , : Springer Singapore : , : Imprint : Springer, , 2017

   ISBN   981-10-2567-3

   Edizione   [1st ed. 2017.]

   Descrizione fisica   1 online resource (XLV, 137 p. 28 illus., 14 illus. in color.)

   Collana   Integrated Disaster Risk Management, , 2509-7091

   Disciplina   363.34

   Soggetti   Environmental economics
                        Risk management
                        Natural disasters
                        Environmental Economics
                        Risk Management
                        Natural Hazards

   Lingua di pubblicazione   Inglese

   Formato   Materiale a stampa

   Livello bibliografico   Monografia

   Nota di bibliografia   Includes bibliographical references at the end of each chapters.

   Nota di contenuto   Introduction -- Enumeration of Categories of Economic Consequences
                        -- Threat Scenarios and Direct Impacts -- Computable General
                        Equilibrium Modeling and Its Application -- User Interface Variable --
                        Estimation of the Reduced Form Coefficients for the E-CAT User
                        Interface -- Uncertainty Analysis -- Validation of Computable General
                        Equilibrium Based Models -- E-CAT User Interface Tool.

   Sommario/riassunto   This study develops a methodology for rapidly obtaining approximate
                        estimates of the economic consequences from numerous natural, man-
                        made and technological threats. This software tool is intended for use
                        by various decision makers and analysts to obtain estimates rapidly. It
                        is programmed in Excel and Visual Basic for Applications (VBA) to
                        facilitate its use. This tool is called E-CAT (Economic Consequence
                        Analysis Tool) and accounts for the cumulative direct and indirect
                        impacts (including resilience and behavioral factors that significantly
                        affect base estimates) on the U.S. economy. E-CAT is intended to be a
                        major step toward advancing the current state of economic
                        consequence analysis (ECA) and also contributing to and developing

interest in further research into complex but rapid turnaround approaches. The essence of the methodology involves running numerous simulations in a computable general equilibrium (CGE) model for each threat, yielding synthetic data for the estimation of a single regression equation based on the identification of key explanatory variables (threat characteristics and background conditions). This transforms the results of a complex model, which is beyond the reach of most users, into a "reduced form" model that is readily comprehensible. Functionality has been built into E-CAT so that its users can switch various consequence categories on and off in order to create customized profiles of economic consequences of numerous risk events. E-CAT incorporates uncertainty on both the input and output side in the course of the analysis.