1. Record Nr. UNINA9910797535203321

Autore	Ray Patrick A.
Titolo	Confronting climate uncertainty in water resources planning and project design : the decision tree framework / / Patrick A. Ray, Casey M. Brown
Pubbl/distr/stampa	Washington, DC : , : World Bank Group, , [2015] ©2015
ISBN	1-4648-0478-8
Descrizione fisica	1 online resource (149 p.)
Disciplina	628.1
Soggetti	Water resources development - Environmental aspects Water resources development - Planning Water resources development - Decision making Water-supply - Environmental aspects Water-supply - Management - Decision making Water-supply - Planning Climatic changes
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Cover; Contents; Foreword; Acknowledgments; About the Authors; Executive Summary; Abbreviations; 1. Introduction; Note; References; 2. Basis for the Decision Tree Framework; Risk Enumeration; Alternative Approaches to Scenario Definition; Background on Decision Scaling; Notes; References; 3. The Decision Tree Framework; Introduction; Phase 1: Project Screening; Phase 2: Initial Analysis; Phase 3: Climate Stress Test; Phase 4: Climate Risk Management; Notes; References; 4. Example Application: Run-of-the-River Hydropower; Introduction; Phase 1: Project Screening; Phase 2: Initial Analysis Phase 3: Climate Stress TestPhase 4: Climate Risk Management; Discussion and Recommendations; Notes; References; 5. Further Guidance for Decision Making under Uncertainty; Introduction; Background; Key Concepts in Decision Making under Uncertainty; Risk Assessment Tools; Risk Management Tools; Summary of Decision Making under Uncertainty; Notes; References; 6. Concluding Remarks; Note; Appendix A: Hydrologic Models; Introduction; Variable Infiltration

Capacity (VIC) Macroscale Hydrologic Model; Sacramento (originally named the Stanford Watershed Model); TOPMODEL
Water Evaluation and Planning/Water Balance (WEAP/WATBAL)Abcd Model; Precipitation Runoff Modeling System (PRMS); Community Land Model (CLM); Soil and Water Assessment Tool (SWAT); Notes; References; Appendix B: Worksheets and Report Templates; Phase 1: The Climate Screening Worksheet; Phase 2: Guidance for the Climate Risk Statement; Phase 3: Guidance for the Climate Risk Report; Phase 4: Guidance for the Climate Risk Management Plan; Reference; Boxes; 2.1 Ex Ante versus Ex Post Scenario Development; 2.2 Bottom-Up, Climate-Informed Decision Making; 3.1 Discount Rates
3.2 General Procedure for a Climate Stress Test5.1 Deep and Severe Uncertainty; 5.2 Robustness and Adaptability or Flexibility; Figures; ES. 1 Illustration of the Decision Tree Framework; 2.1 Schematic Comparison of Decision Scaling with Traditional Approach to Climate Change Risk Assessment Table; 3.1 General Steps in the Decision Tree for Water Resources Projects; 3.2 Decision Tree Schematic; 3.3 Phase 1 Entry and Exit Conditions; 3.4 Project Scoping Workflow for Phase 2;
3.5 Example of Elasticities of Basin Performance Metrics
3.6 Example of Changes in Precipitation, Temperature, and Runoff According to General Circulation Model Projections3.7 Example of Changes to Selected Performance Indicators Associated with General Circulation Model Projections; 3.8 Phase 2 Entry and Exit Conditions;
3.9 Example of a Climate Response Map for a Proposed Run-of-the-River Hydropower Project; 3.10 Downscaled General Circulation Model Count for Climate Response Map Shown in Figure 3.9; 3.11 Phase 3 Entry and Exit Conditions; 3.12 Phase 4 Entry and Exit Conditions
4.1 Downscaled Climate Change Projections for Region of Proposed Hydropower Project

Sommario/riassunto

The Decision Tree Framework is a decision support tool that aims to help project managers and development practitioners to pragmatically assess potential climate risks. This document, developed by the Water Global Practice with the support of our Water Partnership Program (WPP), helps practitioners navigate the maze of existing climate assessment methods and models. The tool first screens for climate vulnerabilities, and a "decision tree" subsequently helps project teams assess and then develop plans to manage climate and other risks. It uses a step-by-step design--similar to a tree on which each "branch" builds off the previous one. [Foreword]--