Corps Risk Analysis Gateway

Corps Risk Analysis Gateway Resources

Series:
Corps Risk Analysis Gateway Resources

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U.S. Army Corps of Engineers

US Army Corps of Engineers

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Corps Risk Analysis Gateway Resources

This resource list is organized by resource topic. A resource may appear in more than one list. The topics include:

- Academia
- Assessment
- Communication
- Corps Applications
- Corps Guidance
- Corps Programs
- Management
- Professional Organizations
- Risk Analysis
- Software
- Other Topics

Academia

Book Link: At War With the Weather
—Howard C. Kunreuther; Erwann O. Michel-Kerjan (The Wharton School) (2009)

At War with the Weather invites the reader — individuals, business decision makers and government policymakers alike — to a groundbreaking examination into how we currently think about catastrophes, (mis)manage risks, and how financial recovery from natural disasters in the United States must radically change.

Source: https://mitpress.mit.edu/books/war-weather

Keywords: academia, management

Book Link: The Irrational Economist
—Erwann O. Michel-Kerjan; Paul Slovic (The Wharton School) (2010)

The Irrational Economist aims to shed light on some important developments in decision making that have occurred in economics and other social sciences over the past few decades, including some of the most recent discoveries. Book includes examples of communicating high consequence/low probability events.

Source: https://www.goodreads.com/book/show/7182306-the-irrational-economist

Keywords: academia, management

Harvard Center for Risk Analysis
— Harvard University

Source: http://www.hcra.harvard.edu

Keywords: academia, communication, risk analysis

Managing Large-Scale Risks in a New Era of Catastrophes
—Howard C. Kunreuther; Erwann O. Michel-Kerjan; Neil Doherty; Martin Grace (The Wharton School) (2008)

With a focus on hurricane risk and flood hazard, and on providing protection to homeowners, Managing Large-Scale Risks in a New Era of Catastrophes provides a series of in-depth analyses of the efficiency and equity of current disaster insurance markets and mitigation programs in the United States, the impact of state-based regulations on insurance protection and the loss distributions among different stakeholders.

Source: https://www.jstor.org/stable/j.ctt5hhn3h

Keywords: academia, management

Market and Government Failure in Insuring and Mitigating Natural Catastrophes: How Long-Term Contracts Can Help
—Howard C. Kunreuther; Erwann O. Michel-Kerjan (The Wharton School, Risk Management and Decision Processes Center) (2009)

Source: https://www.researchgate.net/publication/251856915_Market_and_Government_Failure_in_Insuring_and_Mitigating_Natural_Catastrophes_How_Long-Term_Contracts_Can_Help

Keywords: academia, management

Masters in Risk Management
— Masters in Risk Management

Masters in Risk Management provides readers with information available about risk management degrees. Additionally, they hope to offer valuable information about career opportunities and more in this field.

Source: http://www.mastersinriskmanagement.org

Keywords: academia, management

The Wharton School, Risk Management and Decision Processes Center
— University of Pennsylvania

The Wharton Risk Management and Decision Processes Center is a nexus of people and projects devoted to furthering the practical understanding of how to manage situations of risk involving health, safety, and the environment in both the private and public sectors of our society. The Center does research into the management of low-probability/high-consequence events. In addition to working on programs of basic and applied research, Risk Center faculty serve on national and international advisory committees, with partnerships in government, academia, industry, and NGOs.

Source: http://riskcenter.wharton.upenn.edu/

Keywords: academia, assessment, communication, management

Assessment

@Risk Software
— Palisade Corporation

This model links to Excel and is able to do Monte Carlo simulations, distributions, statistics, and other risk assessment.

Source: http://www.palisade.com/RISK/

Keywords: software, assessment

Aceit: Automated Cost Estimating Integrated Tools
— Telecote Research, Inc.

ACEIT (Automated Cost Estimating Integrated Tools) is a family of applications that support program managers and cost/financial analysts during all phases of a program's life-cycle. ACEIT applications are the premier tool for analyzing, developing, sharing, and reporting cost estimates, providing a framework to automate key analysis tasks and simplify/standardize the estimating process. This software also has tools for Monte Carlo simulations, statistical distributions, and more. The Army has a universal license and this can be obtained at no cost to Corps employees.

Source: http://www.aceit.com/

Keywords: software, assessment

Application of Cost Risk Analysis Methods to Develop Contingencies for Civil Works Total Project Costs, Corps Engineering and Construction Bulletin
— U.S. Army Corps of Engineers (2007)

Application of Cost Risk Analysis Methods to develop contingencies for Civil Works Total Project Costs.

Source file: https://www.iwrlibrary.us/document/0d509fe5-c017-4725-d3eb-01ce29e28ec0 (Series)

Keywords: Corps applications, assessment

Beach-Fx
— U.S. Army Corps of Engineers

BEACH-fx is a Corps planning, certified, shore protection, and engineering-economic software tool. The model consists of a Monte-Carlo simulation that evaluates reach erosion, physical storm impacts and damages that occur from a storm passing a shore.

Source: http://hera.cdmsmith.com/beachfx/default.aspx

Keywords: software, assessment

Beach-fx: Monte Carlo Life-Cycle Simulation Model for Estimating Shore Protection Project Evolution Cost and Benefit Analysis
—Mark B. Gravens; Richard M. Males; David A. Moser, PhD (U.S. Army Engineer Research & Development Center, Coastal and Hydraulics) (2006)

Describes the Beach-fx model as a way of estimating beach nourishment project costs and benefits over the project life.

Source: https://www.iwrlibrary.us/document/67adfca5-8699-4341-8772-8ab1f65669e9 (Series)

Keywords: Corps applications, assessment

Carver Plus Shock Method for Food Sector Vulnerability Assessments
(2005)

Describes the Carver plus SHOCK method in how to identify and assess potential areas of risk; a case study for food.

Source: https://www.fda.gov/food/food-defense-programs/carver-shock-primer

Keywords: software, assessment

Coastal Flood Exposure Mapper
— NOAA

Source: https://coast.noaa.gov/digitalcoast/tools/flood-exposure.html

Keywords: assessment, risk analysis

Corps Cost Engineering Center, Walla Walla District
— U.S. Army Corps of Engineers

Cost Engineering provides the United States Army Corps of Engineers with estimating services for the construction features on all projects from the planning phases through construction, maintenance, and rehabilitation of facilities.

Source: http://www.nww.usace.army.mil/Missions/CostEngineering.aspx

Keywords: Corps programs, assessment

Crystal Ball
— Oracle

Spreadsheet-based application suite for predictive modeling, forecasting, simulation, and optimization. Evaluates critical factors affecting risk.

Source: https://www.oracle.com/middleware/technologies/crystalball.html

Keywords: software, assessment

Decision Making Under Uncertainty
—Martin T. Schultz; Kenneth N. Mitchell; Brian K. Harper; Todd S. Bridges (U.S. Army Engineer Research & Development Center) (2010)

This report introduces concepts, principles, and approaches for addressing uncertainty in decision making. The sources of uncertainty in decision making are discussed, emphasizing the distinction between uncertainty and risk, and the characterization of uncertainty and risk. The report provides a brief overview of decision theory and presents a practical method for modeling decisions under uncertainty and selecting decision alternatives that optimize the decision maker's objectives.

Source: https://www.iwrlibrary.us/document/3b7f4958-4c6a-4809-b8b7-e0f154b5c1c9 (Series)

Keywords: Corps applications, assessment, management

Documentation and Demonstration of a Process for Risk Analysis of Proposed Modification to the Sacramento River Flood Control Project (SRFCP) Levees
—WEST Consultants, Inc. (USACE Hydrologic Engineering Center) (2009)

This document provided a probabilistic analysis tools in a system-wide context to assess performance from modifications to project levees.

Source: http://www.hec.usace.army.mil/publications/ProjectReports/PR-71.pdf

Keywords: Corps applications, assessment

EM 1110-2-1619: Risk-Based Analysis for Flood Damage Reduction Studies
— U.S. Army Corps of Engineers (1996)

Procedures described lead to estimation of expected benefits of proposed flood damage reduction plans using risk and uncertainty analysis.

Source: https://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/

EM_1110-2-1619.pdf

Keywords: Corps applications, assessment

EP 1130-2-500: Appendix B, Rehabilitation Evaluation Report
— U.S. Army Corps of Engineers (1996)

Provides guidance for Rehabilitation Evaluation Reports

Source:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerPamphlets/
EP_1130-2-500.pdf
Keywords: Corps guidance, assessment

EP 1130-2-500: Appendix C, Conceptual Approach for Analyzing Rehabilitation
— U.S. Army Corps of Engineers (1996)

This guidance provides a conceptual approach for analyzing rehabilitation. Requires risk-based benefit-cost analysis and criteria.

Source:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerPamphlets/
EP_1130-2-500.pdf

Keywords: Corps guidance, assessment

EP 1130-2-500: Appendix E. Benefits Evaluation Procedures
— U.S. Army Corps of Engineers (1996)

The appendix outlines basic procedures that can be used to evaluate rehabilitation for navigation and hydropower project purposes.

Source:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerPamphlets/EP_1130-2-500.pdf

Keywords: Corps guidance, assessment

EP 1130-2-500: Appendix F, Example of Combining Risks and Consequences
— U.S. Army Corps of Engineers (1996)

This guidance provides an evaluation of procedures for major rehabilitation where risk-based benefit-cost analysis is used.

Source:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerPamphlets/EP_1130-2-500.pdf

Keywords: Corps guidance, assessment

ER 1105-2-101: Risk Assessment for Flood Risk Management Studies
(2017)

This regulation provides guidance on risk assessment requirements for flood management studies including but not limited to feasibility studies, post-authorization changes, general reevaluation studies, dam and levee safety studies, and major rehabilitation studies. This regulation is jointly promulgated by Planning and Engineering. The risk framework is a decision-making process that comprises three tasks: risk assessment, risk communication, and risk management, which can be advantageously applied to a variety of water resources management problems. These requirements are part of a broader decision making process that includes similar assessments for risks to the natural environment as well as the social and cultural well-being of people potentially impacted by flood management activities.

Source:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1105-2-101.pdf

Keywords: Corps guidance, assessment

ER 1110-2-1302: Initiatives to Improve Accuracy of Total Project Costs in Civil Works Feasibility Studies Requiring Congressional Authorization
— U.S. Army Corps of Engineers (2008)

This memorandum provides guidance for initiatives to improve the accuracy of total project costs in Civil Works Feasibility Studies.

Source:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1110-2-1302.pdf

Keywords: Corps guidance, assessment

ER 1130-2-500: Chapter 3, Major Rehabilitation Program
— U.S. Army Corps of Engineers

This chapter establishes the policy for major rehabilitation at completed Corps of Engineers projects and determinations of whether such rehabilitation should be accomplished under the Major Rehabilitation Program with Construction, General funds, or for applicable projects, with Construction funds under the Flood Control, Mississippi River and Tributaries appropriation title.

Source:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1130-2-500.pdf

Keywords: Corps guidance, assessment

EViews
— Quantitative Micro Software

EViews offers statistical, forecasting, and modeling tools through an innovative, easy-to-use object-oriented interface.

Source: https://www.eviews.com
Keywords: software, assessment

Five Steps to Risk Assessment, United Kingdom
— United Kingdom

Leaflet from the United Kingdom from the Health and Safety Executive on health and safety risks at the workplace. 5-Step Process is universal.

Source:

Keywords: assessment

HarborSym Software
— USACE IWR Navigation Economic Technologies

HarborSym is a planning-level simulation model designed to assist in economic analyses of coastal harbors. With user provided input data, such as the port layout, vessel calls, and transit rules, the model calculates vessel interactions within the harbor. Unproductive wait times result when vessels are forced to delay sailing due to transit restrictions within the channel; HarborSym captures these delays. Using the model, analysts can calculate the cost of these delays and any changes in overall transportation costs resulting from proposed modifications to the channel's physical dimensions or sailing restrictions.

Source: http://www.iwr.usace.army.mil/Missions/Economics/Container-Model-Suite-of-Tools-CMST-/HarborSym/

Keywords: software, assessment

HEC-FDA Software (Hydrologic Engineering Center Flood Damage Analysis)
— USACE Hydrologic Engineering Center

The Flood Damage Reduction Analysis (HEC-FDA) software developed by the US Army Corps of Engineers' Hydrologic Engineering Center (HEC) provides the capability to perform an integrated hydrologic engineering and economic analysis during the formulation and evaluation of flood risk management plans. HEC-FDA is designed to assist US Army Corps of Engineers
(USACE) study members in using risk analysis procedures for formulating and evaluating flood risk management measures (EM 1110-2-1619, ER 1105-2-101). Also, will assist USACE staff in analyzing the economics of flood risk management projects.

Source: http://www.hec.usace.army.mil/software/hec-fda/

Keywords: software, assessment

Hydrology and Hydraulics Workshop on Riverine Levee Freeboard, 1991
— USACE Hydrologic Engineering Center (1991)

This report summarizes a conference that looked at identifying issues related to riverine levee height.

Source: https://www.iwrlibrary.us/document/629187f1-e1c4-4d49-f291-a5897ddfe1c3 (Series)

Keywords: Corps applications, assessment

Incorporating Complexity and Uncertainty in Planning Models for Engineering, Journal of Contemporary Water Resources and Education
—Mark B. Gravens; Keith Hofseth; Richard M. Males; David A. Moser, PhD; Cory Rogers (USACE Navigation Economic Technologies) (2008)

Describes how the Corps has pursued the development of Monte Carlo simulation models as a key strategy for performing uncertain and complex analysis in navigational studies.

Source: https://www.iwrlibrary.us/document/5d8822a3-0714-4ab5-9441-6b9ac29d35e2 (Series)

Keywords: Corps applications, professional organizations, assessment

Incorporation Risk and Uncertainty into Environmental Evaluation: An Annotated Bibliography
—Charles E. Yoe, PhD (USACE Institute for Water Resources) (1996)

Serves as both a primer on the generic risk analysis literature that will help planners find the tools they need to do risk analysis, as well as a gateway to help more experienced personnel find their way into the environmental resource risk analysis literature.

Source: https://www.iwrlibrary.us/document/9d5f236c-bec3-4b6e-939f-2ca9ae930ce6 (Series)

Keywords: Corps applications, assessment, communication, management

Introducing a Risk Assessment Model for Sport Venues
— U.S. Sports Academy

With the 'unknown certainty' of terrorist actions and fan behavior, it is impossible to ensure a risk-free environment at America's sporting venues. Incidents will happen and emergencies will arise. It is a matter of how one prepares, responds, and recovers to mitigate the consequences of emergencies at a sporting venue. Sport venue managers need to be aware of risk assessment methodologies to detect threats, identify vulnerabilities, and reduce consequences. Information gathered through this process is extremely valuable for enhancing security measures. This article discusses risk assessment and analysis, addresses the need for risk assessments at sporting venues, and describes the sport-specific risk assessment model developed while conducting research through a Homeland Security grant.

Source: http://thesportjournal.org/article/introducing-a-risk-assessment-model-for-sport-venues/

Keywords: professional organizations, assessment

IWR 00-R-10: Methods for Expert-Opinion Elicitation of Probabilities and Consequences for Corps Facilities
—Bilal M Ayyub, PhD, PE (USACE Institute for Water Resources) (2000)

The purpose of this research project was to provide methods for expert-opinion elicitation of probabilities and consequences for Corps facilities for the use of planners, engineers, and others. The report consists of six chapters, references, and acknowledgements. The chapters provide a technical discussion of statistical terms and concepts; detailed discussion of experts and the expert elicitation process followed by an example of processes with results.

Source: https://www.iwrlibrary.us/document/e0193edd-0286-4beb-946d-70c6727b2bba

Keywords: Corps applications, assessment

IWR 00-R-3: Analyzing Uncertainty in the Costs of Ecosystem Restoration
—Benjamin D. Noble; Ronald M. Thom; Thomas H. Green; Amy B. Borde (Battelle) (U.S. Army Corps of Engineers) (2000)

This report summarizes the findings of a preliminary effort to examine the factors that contribute to the differences between projected costs and actual expenditures, and to identify ways to reduce the uncertainty associated with the costs of habitat restoration projects.

Source: https://www.iwrlibrary.us/document/33b9ac77-ef7c-4f80-9699-d2537defbbf4

Keywords: Corps applications, assessment

IWR 00-R-9: Risk Analysis Framework for Cost Estimation
—Charles E. Yoe, PhD (USACE Institute for Water Resources) (2000)

The purpose of this report is to demonstrate the feasibility of using risk analysis to improve both the process of cost estimating and the quality of the cost estimates. Case examples are various types of Corps projects.

Source: http://www.iwr.usace.army.mil/Portals/70/docs/iwrreports/00-R-91.pdf

Keywords: Corps applications, assessment

IWR 01-R-01: A Practical Guide on Conducting Expert-Opinion Elicitation of Probabilities and Consequences for Corps Facilities
—Bilal M Ayyub, PhD, PE (USACE Institute for Water Resources) (2001)

The purpose of this research project was to define techniques for eliciting expert opinion on possible events and their consequences for Corps facilities for use by planners, engineers, and others. The report consists of three chapters, a bibliography, and three appendices. The chapters provide a practical discussion of terms and concepts; detailed discussion of the expert elicitation process followed by an example of processes with results. Appendices provided

detailed discussion of pertinent statistical nomenclature, failure consequences, and heuristics, elicitation, scoring, and aggregation of data.

Source: https://www.iwrlibrary.us/document/e1183c37-8ca5-4265-b229-662874852e23

Keywords: Corps applications, assessment

IWR 02-R-1: Ecosystem Restoration Cost Risk Assessment
—Charles E. Yoe, PhD, Planning and Management Consultants. Ltd. (USACE Institute for Water Resources) (2001)

Uses risk assessment techniques to the estimate of project costs for a Section 206 Study to restore the in-stream riparian habitat for the brown trout and other species to ecologically sustainable levels along Seeley Creek.

Source: https://www.iwrlibrary.us/document/eaf73feb-5204-4693-b95a-2bf41c9e2c17

Keywords: Corps applications, assessment

IWR 92-R-1: Guidelines for Risk and Uncertainty Analysis in Water Resources Planning: Volume I
—The Greeley-Polhemus Group, Inc. (USACE Institute for Water Resources) (1992)

The Heck Valley Flood Control Case Study is a hypothetical study that uses real data from Corps' projects wherever possible to assess and manage risk within corps navigation and flood damage reduction projects.

Source: https://www.iwrlibrary.us/document/f22d454b-04ed-4cc7-9eca-05a0d66e1c0f

Keywords: Corps applications, assessment, management

IWR 92-R-2: Guidelines for Risk and Uncertainty Analysis in Water Resources Planning: Volume II
—The Greeley-Polhemus Group, Inc. (USACE Institute for Water Resources) (1992)

The Heck Valley Flood Control Case Study is a hypothetical study that uses real data from Corps' projects wherever possible to assess and manage risk within corps navigation and flood damage reduction projects.

Source: https://www.iwrlibrary.us/document/9afc8a76-30e3-43fa-8e9e-280c9fc86e2d

Keywords: Corps applications, assessment, management

IWR 96-R-13: Risk Analysis for Dam Safety Evaluation: Hydrologic Risk
—Jery R. Stedinger; David C. Heath; Kay Thompson (USACE Institute for Water Resources) (1996)

The report proposes a method for analyzing hydrologic risk in application to dam safety, and demonstrates through use of a sample analysis.

Source: https://www.iwrlibrary.us/document/6f91cfb1-a060-4390-9f99-fb71486ae4c6

Keywords: Corps applications, assessment

IWR 97-R-7: Risk and Uncertainty Analysis Procedures for the Evaluation of Environmental Outputs
—Charles E. Yoe, PhD; Leigh L. Skaggs (USACE Institute for Water Resources) (1997)

A case study is used to illustrate the role that habitat variable measurements play in the uncertainty that attends the estimation of project outputs. The lessons learned during the course of the case study investigation can be grouped into three categories: preparation, data collection and analysis.

Source: https://www.iwrlibrary.us/document/aed163ca-467a-477e-82b0-8ade1790e1c6

Keywords: Corps applications, assessment

IWR 98-R-6: Reliability and Assessment of Hydropower Equipment
—Bilal M Ayyub, PhD, PE; Mark P. Kaminsky; David A. Moser, PhD (USACE Institute for Water Resources) (1998)

The purpose of this research project was to develop and present an assessment methodology for use in producing time-dependent reliability and hazard functions of hydropower equipment. The development of these hydropower reliability functions is a required step in pursuit of conducting the technical and economic analyses necessary to complete a major rehabilitation study.

Source: https://www.iwrlibrary.us/document/b8e450f9-53a9-4dca-a304-69cd3832ad35

Keywords: Corps applications, assessment

IWR 99-R-2: Tools for Risk Based Economic Analysis
—Richard M. Males (USACE Institute for Water Resources) (1999)

The models discussed provide a framework for developing and storing required data, performing the needed calculations, evaluating results, and comparing with- and without-project alternatives from a benefit/cost perspective.

Source: https://www.iwrlibrary.us/document/2b318244-c436-4281-aec7-10ba621fe369

Keywords: Corps applications, assessment

IWR Planning Suite
— USACE Institute for Water Resources

IWR Planning Suite is a Corps of Engineers planning model that has multiple functions. This model has modules for generating plans, doing cost-effectiveness and incremental cost

analysis, annualizing costs and benefits, multi-criteria decision analysis, and a risk module is in the works.

Source: https://www.iwr.usace.army.mil/Missions/Economics/IWR-Planning-Suite/

Keywords: software, assessment

IWR Report 02-R-4: Beyond Expected Value: Making Decisions Under Risk and Uncertainty
—Richard M. Males (USACE Institute for Water Resources) (2002)

This document describes a three-step process for incorporation of risk analysis into the decision making process: 1. Framing of the problem in terms of risk analysis 2. Application of appropriate tools and techniques to obtain quantified results 3. Use of the quantified results in a structured MCDM process.

Source file: https://www.iwrlibrary.us/document/d15c7196-271f-4afd-9170-b072cca1afe0 (Series)

Keywords: assessment

Journal of Risk Research
— Taylor & Francis

The Journal of Risk Research is an international journal that publishes peer-reviewed theoretical and empirical research articles within the risk field from the areas of social, physical and health sciences and engineering, as well as articles related to decision making, regulation and policy issues in all disciplines.

Source: http://www.tandfonline.com/toc/rjrr20/current

Keywords: professional organizations, assessment, communication, management

Memorandum - Application of Cost Risk Analysis Methods to Develop Contingencies for Civil Works Total Project Costs
— U.S. Army Corps of Engineers (2007)

This report outlines the application of cost risk analysis to develop contingencies for Civil Works total project costs.

Source: https://www.iwrlibrary.us/document/0d509fe5-c017-4725-d3eb-01ce29e28ec0 (Series)

Keywords: Corps guidance, assessment, management

MIL-STD 1629A: Procedures for Performing a Failure Mode, Effects and Criticality Analysis — *Department of Defense (1980)*

This report analyses the failure mode, effects, and criticality analysis (FMECA) as a design tool for maintainability, safety analysis, survivability and vulnerability, logistics support analysis, and for failure detection and isolation subsystem design.

Source: https://www.fmea-fmeca.com/milstd1629.pdf

Keywords: assessment, management

National Flood Risk Management Program
— U.S. Army Corps of Engineers

This website describes the National Flood Risk Management Program: current issues, guidance, news, regional coordination, partnerships, and levee safety.

Source: https://www.iwr.usace.army.mil/Missions/Flood-Risk-Management/Flood-Risk-Management-Program/

Keywords: Corps programs, assessment, communication, management, risk analysis

NOAA Digital Coast

This NOAA-sponsored website is focused on helping communities address coastal issues and has become one of the most-used resources in the coastal management community. The dynamic Digital Coast Partnership, whose members represent the website's primary user groups, keeps the effort focused on customer needs. There are tools and more information on flood risk management.

Source: https://coast.noaa.gov/digitalcoast/

Keywords: software, assessment, communication, management, risk analysis

NOAA Sea Level Rise Viewer

This tool show visual depictions of flood risk within communities.

Source: https://coast.noaa.gov/digitalcoast/tools/slr.html

Keywords: software, assessment, communication

Office of Management and Budget (OMB): Proposed Risk Assessment Bulletin -
— Office of Management and Budget (2006)

The purpose of this bulletin is to enhance the technical quality and objectivity of risk assessments prepared by federal agencies by establishing uniform, minimum standards.

Source:
https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/omb/inforeg/proposed_ risk_assessment_bulletin_010906.pdf

Keywords: assessment

Principles of Risk Analysis for Water Resources
— USACE Institute for Water Resources (2017)

The purpose of this manual is to articulate for USACE and all of its stakeholders the risk analysis process used by USACE in its Civil Works program. The primary audience for this manual is the workforce of the U.S. Army Corps of Engineers. Its secondary audiences include those affected by the Civil Works program as well as those who work closely with USACE in support of their mission.

Source file: https://www.iwrlibrary.us/document/deacd6fd-67d7-4c70-e21e-9c6ccc5bc4ba (Series)

Keywords: Corps applications, assessment, communication, management, risk analysis

R Project for Statistical Computing
— R Project

R is a free software environment for statistical computing and graphics. It compiles and runs on a wide variety of UNIX platforms, Windows and MacOS. To download R, please choose your preferred CRAN mirror.
Source: https://www.r-project.org
Keywords: software, assessment

Risk Analysis for Dam Safety, Engineer Research and Development Center (ERDC) Research
— U.S. Army Engineer Research & Development Center

This website describes the research being conducted on dam safety by ERDC.

Source: http://www.erdc.usace.army.mil

Keywords: Corps programs, assessment

Risk Analysis for Water Resources Planning and Management: Scenarios for Uncertainty, Risk Workshop 2008
— USACE Institute for Water Resources (2008)

This training discusses plan formulation and evaluation techniques under scenario analysis.

Source file: https://www.iwrlibrary.us/document/3f793cb8-a513-4523-a868-294e98b1eb8c

(Series)

Keywords: assessment

Risk Analysis, An International Journal
—Wiley-Blackwell (Society for Risk Analysis)

This website provide information on the International Journal, "Risk Analysis".

Source: http://www.wiley.com/WileyCDA/WileyTitle/productCd-RISA.html

Keywords: professional organizations, assessment, communication, management, risk analysis

The Risk Assessment and Risk Management In Regulatory Decision-Making, Volume 2
— The Presidential/Congressional Commission on Risk Assessment and Risk Management (2007)

In Volume 2 of the two-volume Final Report the Commission discusses issues related to health and environmental risk-based decisions, including recommendations for specific federal regulatory programs and agencies.
Source: http://oaspub.epa.gov/eims/eimscomm.getfile?p_download_id=36372

Keywords: professional organizations, assessment, management

Risk Cost Aspects of Sea Level Rise and Climate Change in the Evaluation of Coastal Protection Projects
—David A. Moser, PhD; Eugene Z. Stakhiv; Limberios Vallianos (USACE Institute for Water Resources, Environmental Protection Agency) (1990)

U.S. Federal coastal protection project planning can incorporate forecasts of sea level rise and storm frequency changes due to climate change through the application of risk and uncertainty analysis techniques. Incorporating future sea level rise and climate change into current projects implies building projects that are too large for existing conditions.

Source: https://www.iwrlibrary.us/document/778cfdc5-be03-494c-cc34-5f3c6bd975de (Series)

Keywords: Corps applications, assessment

Risk World
— Tec-Com Inc.

The website contains information on news, books, resources, jobs, publications, software and more on risk. The topics include everything from hurricanes, bioterrorism, business, risk in everyday life, risk management, and more.

Source: http://www.riskworld.com

Keywords: professional organizations, assessment, communication, management, risk analysis

SAS
— SAS

This company produces SAS statistical software that is commonly used by economists. They also produce other software for risk management, and more.

Source: http://www.sas.com

Keywords: software, assessment

Scenario-Based Planning and Decision-Making: Guidelines for Use in the U.S. Army Corps of Engineers Planning Studies and Literature Review
—Charles E. Yoe, PhD (U.S. Army Corps of Engineers)

A key argument advanced in this white paper is that the Corps' planning process needs to develop a culture of uncertainty. This entails a recognition of the breadth and extent of the uncertainty encountered in the planning process and an organizational commitment to honestly acknowledging and addressing that uncertainty.

Source file: https://www.iwrlibrary.us/document/d1f177c1-a09c-4275-b21b-c72341927b70 (Series)

Keywords: Corps applications, assessment, management

Society for Risk Analysis
— Society for Risk Analysis

The Society for Risk Analysis is a multidisciplinary, interdisciplinary, scholarly, international society that provides an open forum for all those who are interested in risk analysis. Risk analysis is broadly defined to include risk assessment, risk characterization, risk communication, risk management, and policy relating to risk, in the context of risks of concern to individuals, to public and private sector organizations, and to society at a local, regional, national, or global level.

Source: http://www.sra.org

Keywords: professional organizations, assessment, communication, management, risk analysis

SPSS Software
— IBM

Statistical software

Source: http://www-01.ibm.com/software/analytics/spss/

Keywords: software, assessment

Stata
— StataCorps LLC

Statistical software that can assist in risk assessment.

Source: http://www.stata.com

Keywords: software, assessment

Superfund Ecological Risk Assessment 8-Step Process
— Environmental Protection Agency

In the Superfund program, Ecological Risk Assessments are done according the Ecological Risk Assessment Guidance for Superfund (ERAGS).

Source: http://archive.epa.gov/reg5sfun/ecology/web/html/8stepera.html

Keywords: assessment

Thesaurus of Terms Used in Microbial Risk Assessment, Environmental Protection Agency (EPA)
— Environmental Protection Agency

Federal and international agencies, private sector organizations, and academics use terms and definitions differently in their microbial risk assessments. This Thesaurus is a compendium of risk assessment terms found in frameworks, methodologies, and assessments. It provides insight into how various entities use specific microbial risk assessment terms in their activities and helps those responsible for such assessments both conduct and communicate about them more effectively. You can download or view the entire document, but for shorter download times, you may want to open a section at a time.

Source: http://www.epa.gov/waterscience/criteria/humanhealth/microbial/thesaurus/

Keywords: assessment

USACE Levee Safety Program
—Tammy Conforti (Federal Emergency Management Agency) (2008)

Assess the integrity and viability of levees and recommend actions to assure that levee systems do not present unacceptable risks to the public, property, and the environment.

Source:https://www.iwrlibrary.us/document/e3d7e02f-9871-404f-9aff-5a1179a33a20

(Series) Keywords: Corps programs, assessment, management

Using Probabilistic Terrorism Risk Modeling For Regulatory Benefit-Cost Analysis
—Tom LaTourrette; Henry H. Willis (Prepared for Industrial Economics, Inc.) (2007)

This report introduces a framework for using probabilistic terrorism risk modeling in a break-even analysis of a regulatory action, demonstrates an application of the framework on the regulatory analysis of WHTI-L, and discusses how this type of analysis can be further integrated into the regulatory review process.

Source: http://www.rand.org/pubs/working_papers/WR487.html

Keywords: assessment

The Wharton School, Risk Management and Decision Processes Center
— *University of Pennsylvania*

The Wharton Risk Management and Decision Processes Center is a nexus of people and projects devoted to furthering the practical understanding of how to manage situations of risk involving health, safety, and the environment in both the private and public sectors of our society. The Center does research into the management of low-probability/high-consequence events. In addition to working on programs of basic and applied research, Risk Center faculty serve on national and international advisory committees, with partnerships in government, academia, industry, and NGOs.

Source: http://riskcenter.wharton.upenn.edu/

Keywords: academia, assessment, communication, management

Communication

The 100-Year Flood
—USGS (1996)

This is a two-page document with graphics that summarize the 100-year flood concept and how it can be misleading. It includes bar charts to help explain how statistical data can be used to estimate probability of flood events. Some advanced technical language is used.

Source: http://pubs.usgs.gov/fs/FS-229-96/pdf/FS_229-96.pdf

Keywords: communication

100-Year Flood- It's All About Chance
—USGS; Authors: Robert R. Holmes, Jr. and Karen Dinicola (2010)

A one-page article providing detailed background on the "100-year" flood and how it is measured and predicted for any given stream or river. The document includes some simplified language to help make the concepts understandable for people who are trained in statistics or related topics.

Source: http://pubs.usgs.gov/gip/106/

Keywords: communication

2012 Public Survey Findings on Flood Risk
—FEMA (2013)

This information, presented on the FEMA website, details the findings from FEMA's 2012 nationwide study of flood risk awareness among U.S. households. According to FEMA, "this

page is intended for home, property and business owners and other community members interested in better understanding their local flood risk."

Source: https://www.fema.gov/media-library-data/20130726-1923-25045-6047/keytakeaways2012publicsurvey.pdf

Keywords: communication

2012 Local Officials Survey Findings on Flood Risk
—FEMA (2013)

Results of the FEMA annual nationwide study on flood risk awareness, including findings on risk awareness, mitigation, and communication. (https://www.fema.gov/media-library-data/20130726-1923-25045-0226/keytakeaways2012localofficialssurvey.pdf)

Keywords: communication

72 Hour Kit
—Floodtools.com (2012)

This floodtools.com document lists essential items that members of the public should have during an emergency.

Source: http://www.floodtools.com/docs/pdf/72hourkit.pdf?sfvrsn=2

Keywords: communication

[Sample] Hurricane Fact Sheet
—FloodSmart.Gov, National Flood Insurance Program (2007)

This sample hurricane season factsheet from the National Flood Insurance Program can be used as a template and updated with up-to-date information on recent hurricane events, flood risk, flood insurance statistics, and preparation tips.

Source: https://www.fema.gov/national-flood-insurance-program

Keywords: communication

Acronyms and Abbreviations Often Used for Levee Systems
—FEMA (2012)

This list features acronyms and abbreviations that are frequently used in documents relating to the evaluation of levee systems and levee-impacted communities.

Source: http://www.fema.gov/media-library-data/20130726-1538-20490-6715/acronyms_and_abbreviations_often_used_with_levees.pdf

Keywords: communication

Advanced Hydrologic Prediction Service
—NWS (2014)

Weather.gov's inundation maps webpage, featuring maps by city as well as the document "NOAA Partnered Guidelines for the Development of Advanced Hydrologic Prediction Service Flood Inundation Mapping."

Source: http://water.weather.gov/ahps/inundation.php

Keywords: communication

America's PrepareAthon! Resources in Other Languages
—FEMA: America's PrepareAthon! (2014)

Several of the primary PrepareAthon! promotional materials are available in other languages including Spanish, Chinese, Arabic, French, Japanese, and Tagalog.

Source: http://community.fema.gov/node/204

Keywords: communication

Answers to Tough Questions: Talking Points for Community Officials
—FloodSmart.Gov, National Flood Insurance Program (2013)

This National Flood Insurance Program factsheet covers frequently asked questions that the public may ask officials before and after floods events.

Source: https://www.fema.gov/media-library-data/1433530044551-27556c1f19513ad151682dea45f8a457/FS_Answers_Tough_Questions_June2015.pdf

Keywords: communication

Applying Social Science Findings and Visualization Tools to Communicate Risks
(2017)

Webinar presentation on social science findings, theoretical models, best practices, The Digital Coast, Sea Level Rise Viewer and Coastal Flood Exposure Mapper.

Source file: https://corpslakes.erdc.dren.mil/employees/learning/webinars/7March17-FacStillerRisk.pdf

Keywords: communication

ARkStorm Movie
—USGS (2011)

A high-quality video that details a hypothetical scenario of an Atmospheric River 1,000 storm, or ARkStorm, in California. It proposes actions should be taken now to limit risk to life and property.

Source: https://vimeo.com/19012969

Keywords: communication

Baltimore District Levee Safety Program
(2016)

A video providing an overview of the Baltimore District Levee Safety Program, including its inspection process. It highlights the concept of residual risk for those who live behind a levee.

Source: http://www.youtube.com/watch?v=IqgjxHttlJA&feature=youtu.

Keywords: communication

Beach Nourishment: Restoring Our Coast and Reducing Flood Risk Damage
—USACE North Atlantic Division (2013)

A 2-page brochure that explains what beach nourishment is and why it is used to protect and restore beaches.

Source:
http://www.nad.usace.army.mil/Portals/40/docs/Sandy%20Related%20Docs/BEACH%20NOURISHMENT.pdf

Keywords: communication

Becky Bentley Flood Story
—Floodtools.com (2012)

A testimonial video depicting a homeowner whose home was flooded. At the time of the flood event, she did not have flood insurance because her home was not in a floodplain.

Source: https://www.youtube.com/watch?v=g33Ye8A7vnw

Keywords: communication

Building a Setback Levee in West Sacramento
—USACE: Sacramento District (2011)

This is a USACE video that describes what a setback levee is, the benefits of setback levees, and the basics of how they are built.

Source: https://www.youtube.com/watch?v=N0Vj8Qmnma0

Keywords: communication

California Flood Preparedness
—California Department of Water Resources (2013)

This website features flood risk information relating to alluvial fan and debris flow, riverine, coastal, flash, and localized flooding. Although this is a State of California website, it primarily includes general information.

Source: https://water.ca.gov/What-We-Do/Flood-Preparedness

Keywords: communication

Can a Realistic Interactive Visualization Model Communicate Flood Risk More Effectively?
—USACE Learning Center (2014)

This webinar, part of the US Army Corps of Engineers' Flood Risk Communication Webinar Series, proposes a user-friendly, inexpensive model interface that communicates flood risk information effectively and motivates action to reduce risk.

Source: https://www.iwr.usace.army.mil/Missions/Risk-Analysis/Risk-Analysis-Gateway/Learning-Center/Webinars/

Keywords: communication

Caution, Flood Ahead!
—Nebraska Silver Jackets (2014)

A Silver Jackets brochure that offers information on basic flood facts, managing flood risk, and flood response. It includes the "turn around, don't drown" graphic.

Source: https://floods.nebraska.gov/Library/FloodResourcestrifold_NESJ.PDF

Keywords: communication

Communicating Probabilistic Information from Climate Model Ensembles- Lessons from Numerical Weather Prediction
—Elisabeth M. Stephens and Tamsin L. Edwards (2012)

A paper that analyzes novel approaches to visualizing and communicating climate models and compares them to the more established and evaluated communication strategies used in weather prediction models for hurricanes and flood warnings.

Source:
http://www.researchgate.net/profile/David_Demeritt/publication/253644774_Communicating_probabilistic_information_from_climate_model_ensembleslessons_from_numerical_weather_prediction/links/00b7d51f978e54161d000000.pdf

Keywords: communication

Communicating Risks and Benefits: An Evidence-Based User's Guide
—FDA/Department of Health and Human Services (2011)

An FDA/DHHS manual that covers various aspects of evidence-based communication, including: basic processes (affect and emotion, information and persuasion), communication design (readability, warnings and disclosures, shared decision making), and implementation from practitioner and agency perspectives.

Source:
http://www.fda.gov/downloads/AboutFDA/ReportsManualsForms/Reports/UCM268069.pdf

Keywords: communication

Communicating Uncertainty via Probabilities: The Case of Weather Forecasts
—John Handmer and Beth Proudley (2007)

This paper examines public understanding of probabilities and public and specialist understanding of verbal categorical forecast terms. The authors found that the majority of those surveyed have basic understanding about probabilities as used in weather forecasts.

Source: https://www.researchgate.net/publication/229365403_Communicating_uncertainty_via_probabilities_The_case_of_weather_forecasts

Keywords: communication

Communications Toolkit: Materials for Your Outreach and Promotion
—FEMA (2015)

A Toolkit of resources that leaders from organizations can use to plan for a PrepareAthon "Day of Action" to prepare their organization for disasters. The toolkit includes resource materials such as an overview of the PrepareAthon program, key messages, and talking points, as well as social media tools including sample Twitter and Facebook posts.

Source: https://www.fema.gov/media-library-data/1445030226309-7c7bb723c93678b3edf4d69e986862de/20151016_AP_Comm_Toolkit_Sept2015_508.pdf

Keywords: communication

Communications Tools
—FEMA (2015)

A media guide with resources that community and business leaders can use to promote PrepareAthon! drills or events. Resources include an event planning guide, promotional materials, a communications toolkit, digital media tools, an action checklist, certificates of participation, and a participant feedback survey.

Source: https://go.usa.gov/xGkhG

Keywords: communication

The Constitution of Risk Communication in Advanced Liberal Societies
—Jamie K. Wardman (2008)

In this paper, a theoretical scheme is devised to articulate four fundamental "idealized" models of risk communication. The authors aim to bring conceptual clarity to discussions about the use and utility of risk communication.

Source: http://dx.doi.org/10.1111/j.1539-6924.2008.01108.x

Keywords: communication

Corps Concepts: 100 Year Flood
—USACE: Team St. Louis (2012)

A short video produced by St. Louis District explaining the "100-Year" flood concept and how it can be a misleading from the standpoint of the public.

Source: https://www.youtube.com/watch?v=nsV2HQ47uFc

Keywords: communication

Corps Concepts: Levee Inspections
—USACE: Team St. Louis (2011)

A short video produced by St. Louis District describing why USACE conducts levee inspections and what the different types of levee inspections are.

Source: https://www.youtube.com/watch?v=Rn-5DqnfqH8

Keywords: communication

Corps Concepts: Levee Types
—USACE: Team St. Louis (2012)

A video that explains the differences between federally or locally built and federally or locally operated and maintained levees.

Source: https://www.youtube.com/watch?v=FyKyOK3FRd4

Keywords: communication

Corps Concepts: Underseepage Fixes
—USACE: Team St. Louis (2011)

A video describing Corps construction projects that work to control excess underseepage, including seepage berms, relief wells, and slurry trench cutoffs.

Source: https://www.youtube.com/watch?v=4pRNWaJsfMo

Keywords: communication

Corps Concepts: What are Floodways and Spillways?
—USACE: Team St. Louis (2011)

A short video produced by St. Louis District that explains what floodways and spillways are. It also provides a brief history of the structures.

Source: https://www.youtube.com/watch?v=sOWQhvk3gs0

Keywords: communication

Corps Concepts: What is a Levee System?
—USACE: Team St. Louis (2011)

A video that details the components of levee systems, and how communities sharing a levee system have a shared responsibility to maintain it.

Source: https://www.youtube.com/watch?v=1-7_P3ursLw

Keywords: communication

Corps Concepts: What's a Levee?
—USACE: Team St. Louis (2010)

A short video produced by St. Louis District describing the basic facts of levees.

Source: https://www.youtube.com/watch?v=ix32QtAeOiI

Keywords: communication

Corps Concepts: What's Underseepage?
—USACE: Team St. Louis (2011)

A short video produced by St. Louis District describing underseepage and sand boils, and the problems that they can cause.

Source: https://www.youtube.com/watch?v=8RtiOMZJxC0

Keywords: communication

The Cost of Flooding
—FloodSmart.Gov, National Flood Insurance Program (2015)

This National Flood Insurance Program tool illustrates the potential costs of flooding for homeowners and allows users to input a sample home size and flood height to calculate total monetary losses.

Source: https://www.fema.gov/data-visualization-floods-data-visualization

Keywords: communication

Critical Think Piece Title: A Partnership for Flood Risk Communication: "Many Partners – One Voice – Communicating Risk"
—T. Friona, M. Gilmer, R. Pinzon, and G. Williams (2008)

This Critical Think Piece covers priorities for flood risk communication for the Corps. The authors discuss main concerns including confusing terminology and definitions, the lack of efficient and effective distribution of communication standards, and not speaking to the nation with "one voice."

Source:
https://www.iwr.usace.army.mil/Portals/70/docs/CTP/teamblueeagles/APartnershipforFloodRiskCommunicationPaper.pdf

Keywords: communication

Decade of work to reduce flood risk nearly complete in Napa
—USACE: Sacramento District (2013)

This video explains USACE's expansive flood risk reduction efforts in Napa, California including restoring natural floodplains and wetlands, raising bridges, and building flood walls.

Source: https://www.youtube.com/watch?v=IfopSvtIMLU

Keywords: communication

Developing a Translational Discourse to Communicate Uncertainty in Flood Risk between Science and the Practitioner
—Hazel Faulkner, Dennis Parker, Colin Green and Keith Beven (2007)

This paper outlines the tools available for the development of a discourse between scientists developing flood models and professional groups who receive flood risk estimates in the UK. The described tools may be applicable to USACE communications.

Source: http://www.jstor.org/stable/25547838?seq=1#page_scan_tab_contents

Keywords: communication

Discussing the Results of the Georgia Hurricane Evacuation Study
—USACE (2014)

This draft paper discusses the results of USACE Savannah District's Georgia Hurricane Evacuation Study, including data and information on hazards due to hurricanes, social vulnerability, attitudes and intended behavior of coastal Georgians in response to the threat of a hurricane, a transportation analysis, and a GeoPDF mapping tool. (https://www.iwrlibrary.us/document/c54ea1ce-8e51-446d-cfef-4b44ffe099b7)

Keywords: communication

The Distinction Between Risk and Hazard: Understanding and Use in Stakeholder Communication
—Dirk Scheer, Christina Benighaus, Ludger Benighaus, Ortwin Renn, Stefan Gold, Bettina Roder, and Gaby-Fleur Bol (2014)

While not specific to flood risk, this journal article discusses why communication is difficult when scientists and engineers think in terms of risk while the public does not differentiate risk from hazard. Their discussion has implications for risk message development.

Source: http://dx.doi.org/10.1111/risa.12169

Keywords: communication

Does Communicating (Flood) Risk Affect (Flood) Risk Perceptions? Results of a Quasi-Experimental Study
—Teun Terpstra, Michael K. Lindell and Jan M. Guttelingy (2009)

This study evaluates the effects of a small-scale flood risk communication program in the Netherlands. The authors evaluated participants' attitude change due to direct personal experience and attitude polarization. They concluded with the possibility that attitude polarization could cause people to confirm their preexisting beliefs, which could have important implications for risk communication.

Source: http://dx.doi.org/10.1111/j.1539-6924.2009.01252.x

Keywords: communication

Efficient and effective? The 100-year flood in the communication and perception of flood risk
—Heather M. Bell and Graham A. Tobin (2007)

A peer-reviewed paper describing the background of the 100-year flood as a standard for the National Flood Insurance Program and findings from a survey that compared citizens' perceptions of different descriptions and characterizations of the 100-year event.

Source: https://www.researchgate.net/publication/223027139_Efficient_and_effective_The_100-year_flood_in_the_communication_and_perception_of_flood_risk

Keywords: communication

Emergency Plan
—Floodtools.com (2012)

This checklist by Floodtools.com presents considerations and tips to help members of the public create emergency plans, including: steps to making a plan, things to consider, and advice for practicing and reviewing plans.

Source: http://www.floodtools.com/docs/pdf/emergencyplan.pdf?sfvrsn=2

Keywords: communication

Emergency Preparedness Guidelines for Levees
—U.S. Department of Homeland Security (2012)

A USACE guide for owners and operators of levees that provides recommendations and practical steps for planning and preparing for flood events, specifically with regard to managing levees, floodwalls, and pumping stations.

Source: http://cdm16021.contentdm.oclc.org/cdm/ref/collection/p16021coll11/id/1749

Keywords: communication

Emergency Watershed Protection (EWP) Program
—USDA/NRCS (2011)

A USDA factsheet that describes the department's Emergency Watershed Protection Program, including the purpose of the program and the type of work that is authorized by it.

Source: https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/ewpp

Keywords: communication

Enhancing flood resilience through improved risk communications
—J. J. O'Sullivan, R. A. Bradford, M. Bonaiuto, S. De Dominicis, P. Rotko, J. Aaltonen, K. Waylen, S. J. Langan (2012)

This paper describes a framework of guiding recommendations for effective pre-flood and flood warning communications, based on the URFLood project in Finland, Ireland, Italy, and Scotland.

Source: http://www.nat-hazards-earth-syst-sci.net/12/2271/2012/nhess-12-2271-2012.pdf

Keywords: communication

FEMA's Flood Map Service Center
—FEMA (2015)

A source for flood hazard information produced in support of the National Flood Insurance Program. This source can be used to find flood maps and tools that help to explain flood risk to the public.

Source: http://msc.fema.gov/portal

Keywords: communication

Flood after Fire Risks
—FloodSmart.Gov, National Flood Insurance Program (2013)

This factsheet explains the flood risk associated with wildfires, including heavy rains, flash floods, and mudflows.

Source: https://www.ready.gov/sites/default/files/Flood_After_Fire_Fact_Sheet.pdf

Keywords: communication

Flood Ed- Got Questions?
—Floodtools.com (2014)

This webpage on floodtools.com lists frequently asked questions and answers about the National Flood Insurance Program and flood insurance policies.

Source: http://www.floodtools.com/flooded-got-questions

Keywords: communication

Flood Follows Risk (1st tab)
—Floodtools.com (2014)

An interactive website from the insurance industry that provides information on how different kinds of floods occur, including coastal storm surge, flash flooding, levee failure and others. The user can click on an illustration of a watershed to navigate to descriptions of each possible flood scenario.

Source: http://www.floodtools.com/Home.aspx

Keywords: communication

Flood Insurance 101: Talking Points for Community Officials
—FloodSmart.Gov, National Flood Insurance Program (2013)

This 3-page factsheet explains the importance of having flood insurance, how premiums are set, and what flood insurance does and does not cover.

Source: https://www.fema.gov/media-library/assets/documents/11337

Keywords: communication

Flood Insurance: How it Works
—FloodSmart.Gov, National Flood Insurance Program (2013)

This National Flood Insurance program factsheet describes the basics of flood insurance, including purchasing, requirements, waiting periods, and what is and is not covered.

Source: https://www.fema.gov/media-library/assets/documents/11132

Keywords: communication

Flood Maps: Talking Points for Community Officials
—FloodSmart.Gov, National Flood Insurance Program (2014)

This National Flood Insurance Program factsheet presents talking points that can help government officials explain Flood Insurance Rate Maps to the public.

Source: https://www.fema.gov/media-library-

data/1427835290004-22824862b99303693084223569da53a8/

Flood_Maps_TP_Community_Officials_03132015.pdf

Keywords: communication

Flood Protection
—Federal Alliance for Safe Homes (2015)

A Flash.org video that discusses inexpensive measures that homeowners can take before a flood occurs, including elevating electrical outlets and basement appliances such as washers and dryers.

Source: http://flash.org/video.php?id=19

Keywords: communication

Flood Risk and Flood Insurance: The FloodSmart Campaign
—FloodSmart.Gov, National Flood Insurance Program (2013)

This National Flood Insurance Program factsheet explains the creation of and strategy for the FloodSmart campaign, which promotes awareness about the threat of flooding caused by weather-related events.

Source: https://www.fema.gov/media-library/assets/documents/11165

Keywords: communication

Flood Risk and Insurance: Know the Facts
—FloodSmart.Gov, National Flood Insurance Program (2013)

A National Flood Insurance program factsheet discussing the basics of flood risk and flood insurance.

Source: https://www.fema.gov/national-flood-insurance-program

Keywords: communication

Flood Risk Communication - Visualization Tools and Evaluations of Effectiveness
—M.K.M. Charrière, S.J. Junier, E. Mostert & T.A. Bogaard (2013)

This study reviews the field of visual risk communication by inventorying examples of visual communication, reviewing flood risk mapping research and practice, and analyzing examples of evaluation of effectiveness. The authors conclude that the field is advanced but that there is a need to integrate prevention and preparedness in the same communication tools.

Source: https://www.semanticscholar.org/paper/Flood-risk-communication%3A-Visualization-tools-and-Charri%C3%A8re-Junier/a16dbb66048678f771f7170cfe1a124ecee74c10?p2df

Keywords: communication

Flood Risk Communication Case Study: California (Central Valley)
(2016)

A case study report that identifies challenges in risk communication along with potential solutions for overcoming those challenges in the context of Central Valley, California. The

report discusses California's Flood Preparedness week, an event that provides a mechanism for local officials to discuss real flood risk in a non-threatening environment.

Source file: https://www.iwrlibrary.us/document/96c9a58a-6023-4484-e918-6716f48d4477 (Series)

Keywords: communication

Flood Risk Communication Case Study: Central Shenandoah Valley, Virginia
(2016)

A case study report that identifies challenges in risk communication along with potential solutions for overcoming those challenges in the context of the Central Shenandoah Valley, Virginia. The report discusses a program targeting the general public, children, the business community, and "special populations."

Source: https://www.iwrlibrary.us/document/1b124028-b69a-440f-8a95-b55713554d90 (Series)

Keywords: communication

Flood Risk Communication Case Study: Charlotte-Mecklenburg County, North Carolina
(2016)

A case study report that identifies challenges in risk communication along with potential solutions for overcoming those challenges in the context of Charlotte-Mecklenburg County, North Carolina. The report discusses the county Storm Water Services Division's data-driven process to support flood risk communication and mitigation decisions that exceed federal standards.

Source: https://www.iwrlibrary.us/document/35bc96a8-3ad6-4256-cd4b-50d26a4c2f2b (Series)

Keywords: communication

Flood Risk Communication Case Study: City of Fort Collins, Colorado
(2016)

A case study report that identifies challenges in risk communication along with potential solutions for overcoming those challenges in the context of Fort Collins, Colorado. The report discusses the City's long-term public outreach initiatives and 2013 social media campaign.

Source: https://www.iwrlibrary.us/document/cd3df296-d19a-4a6b-9b6d-956276a563e5 (Series)

Keywords: communication

Flood Risk Communication Case Study: City of Pasadena, Texas
(2016)

A case study report that identifies challenges in risk communication along with potential solutions for overcoming those challenges in the context of the City of Pasadena, Texas. The

report discusses the City's implementation of the National Flood Insurance Program's Program for Public Information.

Source: https://www.iwrlibrary.us/document/0a7af696-c155-4845-c213-a1a40e399651 (Series)

Keywords: communication

Flood Risk Communication Case Study: Glasgow, Montana
(2016)

A case study report that identifies challenges in risk communication along with potential solutions for overcoming those challenges in the context of Glasgow, Montana. The report discusses an outreach effort that Omaha District and Silver Jackets conducted as part of the System Wide Improvement Framework.

Source: https://www.iwrlibrary.us/document/c094267b-d185-4d7a-dedf-60fda6026af5 (Series)

Keywords: communication

Flood Risk Communication Case Study: Indian Creek Watershed, Iowa
(2016)

A case study report that identifies challenges in risk communication along with potential solutions for overcoming those challenges in the context of the Indian Creek Watershed, Iowa. The report discusses the Iowa-Cedar Watershed Interagency Coordination Team's series of public “visioning exercise” workshops for stakeholders.

Source file: https://www.iwrlibrary.us/document/f2612ed3-c6df-4ddb-8b14-3d26ac8e5a85 (Series)

Keywords: communication

Flood Risk Communication Case Study: Lake Isabella Dam, Kern County, California
(2016)

A case study report that identifies challenges in risk communication along with potential solutions for overcoming those challenges in the context of the Lake Isabella Dam, Kern County, California. The report discusses a Corps outreach effort to keep stakeholders and the public apprised of a dam safety modification plan and to encourage evacuation planning by the County.

Source: https://www.iwrlibrary.us/document/7d6729f1-5aff-482e-ede2-53472cf7ca61 (Series)

Keywords: communication

Flood Risk Communication Case Study: St. Bernard Parish, Louisiana
(2016)

A case study report that identifies challenges in risk communication along with potential solutions for overcoming those challenges in the context of St. Bernard Parish, Louisiana. The report discusses the Parish and Lake Borgne Basin Levee District's (levee district) outreach campaign to educate the public about FEMA flood mitigation enhancement projects, and to increase the general level of flood risk awareness, preparedness, and mitigation in the region.

Source: https://www.iwrlibrary.us/document/349598df-68c9-4147-e128-8cfb7f7a9eef (Series)

Keywords: communication

Flood Risk Communication Case Study: Tulsa, Oklahoma
(2016)

A case study report that identifies challenges in risk communication along with potential solutions for overcoming those challenges in the context of Tulsa, Oklahoma. The report discusses the Oklahoma Silver Jackets team pilot program for public engagement that lays out a strategy for educating members of the public on flood risk and encouraging them to take actions to reduce risk.

Source: https://www.iwrlibrary.us/document/2883782c-cb77-4c5f-d098-3a7fd33f34c0 (Series)

Keywords: communication

Flood Risk Communication: Challenges, Successes, and Lessons Learned
(2016)

This study assesses outreach programs of ten communities to understand common challenges of risk communication, and where possible, identify potential solutions to overcoming these challenges. The document synthesizes the results of the study and provides individual vignettes (case studies) about each community. The case studies are also posted individually to this section of the Toolbox.

Source: https://www.iwrlibrary.us/document/c829a764-72d2-42c7-9032-e358ca7fb8f3 (Series)

Keywords: communication

Flood Risk Management: Backflow Prevention Measures
—USACE Philly District (2012)

This USACE video focuses on backflow prevention measures at tributaries and at storm sewer outlets.

Source: https://www.youtube.com/watch?v=qzaNVis8pyc

Keywords: communication

Flood Risk Management: Flood Proofing
—USACE Philly District (2013)

A video describing dry and wet flood proofing measures and how they can protect against floods if used in the correct situations.

Source: https://www.youtube.com/watch?v=eAmLMTKYB10

Keywords: communication

Flood Risk Management: Floodplains and Floodways
—USACE Philly District (2012)

A short video produced by Philadelphia District describing floodplains and floodways and how they relate to flood risk.

Source: https://www.youtube.com/watch?v=Pqyessf4xBA

Keywords: communication

Flood Risk Management: Levees and Floodwalls
—USACE Philly District (2012)

This is a video produced by the Philadelphia District detailing the basics of levees and floodwalls, as well as issues associated with these structures.

Source: https://www.youtube.com/watch?v=FPJac74QUrc

Keywords: communication

Flood Risk Management: Ring Levee
—USACE Philly District (2012)

A video describing what a ring levee is and how it differs from other types of levees. Source:

https://www.youtube.com/watch?v=HmrFSR2RADo

Keywords: communication

Flood Risk Management: Structural and Non-Structural Measures
—USACE Philly District (2012)

A USACE video that explains the differences between structural and non-structural flood risk management measures.

Source: https://www.youtube.com/watch?v=TC6_Qd3nIzs

Keywords: communication

Flood Risk Management: Structure Elevation
—USACE Philly District (2012)

A video explaining what structural elevation is and how it can protect a home from flood water.

Source: https://www.youtube.com/watch?v=CyY_6-mxdMs

Keywords: communication

Flood Safety
—NOAA NWS (2005)

A National Weather Service webpage that allows the user to click through tabs to access information regarding flood safety, flood warnings vs. watch, and actions to take before, during, and after a flood.

Source: https://www.weather.gov/safety/flood

Keywords: communication

Floodproofing Non-Residential Buildings
—FEMA (2013)

A FEMA guide presenting in-depth information on design considerations for floodproofing, dry floodproofing measures, and other flood protection measures.

Source: https://www.fema.gov/media-library-data/1541615774329-170190ea05ddbbb6fdc5f1170a018d41/P-936_11-06-18_508r.pdf

Keywords: communication

Frank Billingsley Flood Story
—Floodtools.com (2012)

A testimonial video of a homeowner who explains the importance of having flood insurance after a flood damaged his home.

Source: https://www.youtube.com/watch?v=YsEPXZZFAfY

Keywords: communication

Get Ready: Isabella dams failure could lead to 'shocking' flooding
—Eyewitness News: Get Ready Kern County (2015)

This video is part of a flood preparation series produced by a local news network that illustrates the potential effects of different types of floods. It highlights the need for residents to prepare for worst-case flood scenarios.

Source: http://bakersfieldnow.com/archive/get-ready-isabella-dams-failure-could-lead-to-shocking-flooding

Keywords: communication

Harvard Center for Risk Analysis
— Harvard University

Source: http://www.hcra.harvard.edu

Keywords: academia, communication, risk analysis

Heavy Rain and Snowmelt
—Floodtools.com (2012)

A testimonial video of business owners affected by heavy rain and snowmelt who were grateful for having flood insurance.

Source: https://youtu.be/c0IR9jHyhyc

Keywords: communication

History of Levees
—FEMA (2012)

This FEMA factsheet describes the history of levees since the early 20th century, including major legislation that has worked to develop the nation's levee systems.

Source: https://www.fema.gov/media-library/assets/documents/22863

Keywords: communication

Homeowner's Guide to Retrofitting
—FEMA (2014)

An in-depth FEMA guide covering retrofitting methods, deciding which method is appropriate for a given home, elevating homes, relocation and demolition, floodproofing, barriers (including levees and floodwalls), and protecting service equipment.

Source: http://www.fema.gov/media-library-data/1404148604102-f210b5e43aba0fb393443fe7ae9cd953/FEMA_P-312.pdf

Keywords: communication

How Levees Fail, How We Fix Them
—USACE: Sacramento District (2011)

A short video produced by Sacramento District describing the risks associated with levees and how levees are rebuilt.

Source: https://www.youtube.com/watch?

v=A1IxIKLV68E Keywords: communication

How to Communicate Flood Risks Effectively
—Tim L. Tinker and Gerald E. Galloway (2009)

A paper that offers insight on principles of risk communication which can be used to more effectively communicate flood risk to the public at different stages of a flood event. The authors recommend communicating risk in multiple ways, and acknowledging uncertainty, among five other main points.

Source:
http://greatlakesresilience.org/sites/default/files/library_reports_2008_BoozAllenHamilton_HowDoYouEffectivelyCommunicateFloodRisks.pdf

Keywords: communication

How to Prepare for a Flood
—FEMA: America's PrepareAthon! (2015)

A PrepareAthon document including basic information about floods, types of emergency notifications, flood preparation action items, and information on protecting one's self during and after a flood.

Source: http://www.fema.gov/media-library-data/1409002852888-3c5d1f64f12df02aa801901cc7c311ca/how_to_prepare_flood_033014_508.pdf

Keywords: communication

Hurricane and Storm Damage Risk Reduction System (HSDRRS) Flyover Video
—USACE Team New Orleans (2012)

A USACE video discussing how the Corps has built a storm damage risk reduction system post-Hurricane Katrina.

Source: https://www.youtube.com/watch?v=4wMnFxWqlMQ

Keywords: communication

Hurricane Katrina, New Orleans Flood Story
—Floodtools.com (2012)

A testimonial video depicting a homeowner affected by levee breaches in New Orleans during Hurricane Katrina. She expresses the importance of having flood insurance.

Source: https://www.youtube.com/watch?v=Lz8nr4Mjk6M

Keywords: communication

Hurricane Sandy Recovery Mission: Commander's Update October 2013
—USACE North Atlantic Division (2013)

An update from Brig. Gen. Ken Savre with language about risk reduction and the concept of residual risk that can be used in communication efforts.

Source:
http://www.usace.army.mil/Portals/2/docs/Emergency%20Ops/Sandy/Commanders%20Update%20October%202013.pdf

Keywords: communication

Incorporation Risk and Uncertainty Into Environmental Evaluation: An Annotated Bibliography
—Charles E. Yoe, PhD (USACE Institute for Water Resources) (1996)

Serves as both a primer on the generic risk analysis literature that will help planners find the tools they need to do risk analysis, as well as a gateway to help more experienced personnel find their way into the environmental resource risk analysis literature.

Source: https://www.iwrlibrary.us/document/9d5f236c-bec3-4b6e-939f-2ca9ae930ce6 (Series)

Keywords: Corps applications, assessment, communication, management

Increased Cost of Compliance: Talking Points for Community Officials
—FloodSmart.Gov, National Flood Insurance Program (2013)

A National Flood Insurance Program factsheet that provides talking points about Increased Cost of Compliance (ICC), including determining ICC eligibility and payment for mitigation activities.

Source: https://www.fema.gov/media-library-data/1381432404241-303cfa28a4778049613160a3d3da7350/FS_ICCTPForCommunity_092013.pdf

Keywords: communication

Interim Risk Reduction Measures Fact Sheet
—USACE HQ (2012)

A USACE factsheet that discusses interim risk reduction measures, including what triggers their need, who is responsible for developing them, who pays for them, and examples of these projects.

Source: http://cdm16021.contentdm.oclc.org/cdm/ref/collection/p16021coll11/id/1740

Keywords: communication

It'll never happen to me': understanding public awareness of local flood risk
—Kate Burningham, Jane Fielding, and Diana Thrush (2007)

This paper contributes to understanding people's recognition that their property is in a high flood risk area. The authors conclude "that the problem is often not simply a lack of awareness, but rather, assessments of local risk based on experience that underestimate the impact of rare or extreme events. "

Source: http://dx.doi.org/10.1111/j.1467-7717.2007.01036.x

Keywords: communication

IWR 96-R-14: Applied Risk Communication Within the Corps of Engineers
—Clifford S. Russell; Kevin O'Grady (for USACE IWR) (Virginia Polytechnic Institute and State University) (1996)

Examines the communication of risk information throughout the Corps and communication of risk information with non-Federal project sponsors.

Source: https://www.iwrlibrary.us/document/a2babdf4-7b96-4a0e-a6af-3535f6c42b01

Keywords: Corps applications, communication

Journal of Risk Research
— Taylor & Francis

The Journal of Risk Research is an international journal that publishes peer-reviewed theoretical and empirical research articles within the risk field from the areas of social, physical and health sciences and engineering, as well as articles related to decision making, regulation and policy issues in all disciplines.

Source: http://www.tandfonline.com/toc/rjrr20/current

Keywords: professional organizations, assessment, communication, management

Key Challenges to Communicating Risk of Flooding from Hurricane Matthew
— USACE Institute for Water Resources (2017)

The response to Hurricane Matthew demonstrated the many challenges to communicating flood risk by local, state, and federal officials. But, it can also be an opportunity to reflect and

review recommendations for how officials can most effectively communicate risk so that lives are saved in future disasters.

Source file: https://www.iwrlibrary.us/document/5c142525-a163-4f3e-e603-aa99a738315f (Series)

Keywords: communication

Leader's Guide to Environmental Public Involvement
—Army Public Involvement Toolbox (2005)

A U.S. Army document that supplements the USACE Regulation 200-3-1 and Engineer Pamphlet 1110-3-8, "Public Participation in the Defense Environmental Restoration Program for Formerly Used Defense Sites." This guide provides information for establishing and executing a successful public involvement program. Section 5.0 covers risk communication.

Source:
http://www.asaie.army.mil/Public/IE/Toolbox/documents/final_leaders_guide_to_public_involvement.pdf

Keywords: communication

Learn about Natural Hazards in Your Neighborhood
—California Emergency Management Agency (2015)

A tool that allows users in California to discover the hazards that exist in their local areas. The website also provides links to more geographically general information about flood hazards and flood preparedness.

Source: http://myhazards.caloes.ca.gov/

Keywords: communication

Levee Inspections
—USACE (2015)

A USACE HQ webpage that explains levee inspections, including why the Corps conducts them, the types of inspections, and inspection ratings.
https://www.usace.army.mil/Missions/CivilWorks/LeveeSafetyProgram/LeveeInspections.aspx

Keywords: communication

Levees and the National Flood Insurance Program: Improving Policies and Practices, Chapter 7 (Understanding and Communicating Flood Risk Behind Levees)
—National Research Council of the National Academies (2013)

A chapter that describes flood risk perception by the public, a brief history of risk communication in the National Flood Insurance Program, current flood risk communication efforts, and contemporary flood risk mapping.

Source: http://www.nap.edu/read/18309/chapter/9

Keywords: communication

Living with Dams: Know Your Risks
—FEMA (2013)

A FEMA document that covers common beliefs and basic facts about dams. It features graphics and maps.

Source: http://www.fema.gov/media-library-data/20130726-1845-25045-7939/fema_p_956_living_with_dams.pdf

Keywords: communication

Living with Dams: Know Your Risks Brochure
—FEMA (2012)

A booklet for citizens who live near dams, including a "fact or fiction" section on common beliefs about dams and discussion of dam risks as well as flood risk mitigation action items.

Source: http://livingneardams.org/brochure/#/1/

Keywords: communication

Living with Levees: Information for Community Officials
—FEMA (2015)

This FEMA website features useful links and information for community officials that live in areas close to levees. Guidance includes information on how to identify and communicate risk, how levees are categorized and accredited, and requirements for mapping levee restoration or construction projects.

Source: https://www.fema.gov/flood-maps/living-levees/community-officials

Keywords: communication

Living with Levees: Information for Homeowners, Renters, Business Owners and the General Public
—FEMA (2015)

A FEMA webpage that provides risk reduction information to homeowners, renters, business owners, and the general public.

Source: http://www.fema.gov/living-levees-information-homeowners-renters-business-owners-and-general-public

Keywords: communication

Living with Levees: Information for Real Estate, Lending and Insurance Professionals
—FEMA (2015)

A FEMA webpage that provides risk reduction information for real estate, lending, and insurance professionals that operate in communities near levees.

Source: https://www.fema.gov/insurance-professionals-lenders

Keywords: communication

Map Your Risk- (2nd tab)
—Floodtools.com (2014)

This mapping tool allows users to input their home address to see their flood risk based on floodplains, historical floods, and other hazards.

Source: http://www.floodtools.com/Home.aspx

Keywords: communication

Mary Martin Flood Story, Waterbury VT
—Floodtools.com (2012)

A testimonial video showing the effects of Hurricane Irene on an individual's home in Vermont. She states that she was able to rebuild her home quickly because she had flood insurance at the time of the flood event.

Source: https://www.youtube.com/watch?v=1Su9K9JG2lM

Keywords: communication

Models of Best Practice in Flood Risk Communication and Management
—David Demeritt and Sebastien Nobert (2014)

This paper discusses the models that underlie the tactics of effective risk communication. The authors discuss four approaches for risk communication including a risk message model for communicating to the public, a risk instrument model for changing behavior, a risk dialogue model to engage the public in decision making, and a risk government model of self-regulation.

Source:
http://www.kcl.ac.uk/sspp/departments/geography/people/academic/demeritt/Demeritt--Nobert-Env-Hazards-for-submission.pdf

Keywords: communication

National Creative Resources
—FEMA: America's PrepareAthon! (2014)

A hub of creative materials that can be used to promote America's PrepareAthon! activities. Resources include logos, web badges and banners, invitations, and posters.

Source: http://www.fema.gov/media-library/assets/documents/97691

Keywords: communication

National Flood Risk Management Program
— U.S. Army Corps of Engineers

This website describes the National Flood Risk Management Program: current issues, guidance, news, regional coordination, partnerships, and levee safety.

Source: https://www.iwr.usace.army.mil/Missions/Flood-Risk-Management/Flood-Risk-Management-Program/

Keywords: Corps programs, assessment, communication, management, risk analysis

New Jersey beach project protects freshwater wetlands
—USACE Philly District (2013)

This video describes the beach renourishment process in the context of a Philadelphia district project in New Jersey.

Source: https://www.youtube.com/watch?v=KZr6ixJZaPM

Keywords: communication

The NFIP and Levee Systems Frequently Asked Questions
—FEMA (2012)

This Q&A document from FEMA provides information about levees including how they are different from other flood risk reduction structures, who is responsible for building and maintaining levee systems, and what FEMA is doing to address levee system issues, among other topics.

Source: https://www.fema.gov/media-library/assets/documents/9635

Keywords: communication

The NFIP and Levees: An Overview
—FEMA (2007)

This factsheet describes levee risks, FEMA's updates to flood hazard maps, how the NFIP works to reduce risk, and FEMA's levee responsibilities.

Source: http://www.fema.gov/media-library-data/20130726-1534-20490-1225/nfip_lv_overview.pdf

Keywords: communication

NOAA Digital Coast

This NOAA-sponsored website is focused on helping communities address coastal issues and has become one of the most-used resources in the coastal management community. The dynamic Digital Coast Partnership, whose members represent the website’s primary user groups, keeps the effort focused on customer needs. There are tools and more information on flood risk management.

Source: https://coast.noaa.gov/digitalcoast/

Keywords: software, assessment, communication, management, risk analysis

NOAA Sea Level Rise Viewer

This tool show visual depictions of flood risk within communities.

Source: https://coast.noaa.gov/digitalcoast/tools/slr.html

Keywords: software, assessment, communication

Nonstructural Flood Risk Management Measures
—2014 USACE Flood Risk Management and Silver Jackets Workshop (2014)

A USACE factsheet that briefly describes what flood risk is and lists nonstructural flood risk reduction measures.

Source: https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll2/id/826

Keywords: communication

Nonstructural Flood Risk Reduction: A 3-Dimensional View
—USACE Nonstructural and Floodproofing Committee

This video describes various nonstructural flood risk management techniques, including dry floodproofing, elevation, and earthen berms, among others. It also discusses the annualized monetary benefit, costs, and benefit-cost ratio of each type of structure.

Source: https://www.dvidshub.net/video/151922/nonstructural-flood-risk-reduction-3-dimensional-view

Keywords: communication

North Atlantic Coast Comprehensive Study Overview - U.S. Army Corps of Engineers
—USACE North Atlantic Division (2015)

A video that provides an overview of the results of the USACE North Atlantic Coast Comprehensive Study Overview, including the coastal storm risk management framework, products to assess vulnerability and develop performance metrics, and recommendations for flood risk management.

Source: https://www.youtube.com/watch?v=t2BzTH5FoSo

Keywords: communication

North Atlantic Coast Comprehensive Study Report and Related Documents
—USACE North Atlantic Division (2015)

A hub of resources regarding the USACE North Atlantic Coast Comprehensive Study, including a map of risk management strategies and links to reports and products from the initiative.

Source: http://www.nad.usace.army.mil/compstudy

Keywords: communication

OMB M-07-24: Updated Principles on Risk Analysis
— Office of Management and Budget (2007)

This Memorandum from the Office of Management and Budget reinforces the 1995 Principles for Risk Analysis with reference to more recent guidance from the scientific community, the Congress, and the Executive Branch. This Memorandum also benefits from feedback received on OMB's Proposed Risk Assessment Bulletin issued in 2006 (Proposed Risk Assessment Bulletin).

Keywords: communication, risk analysis

Perception and Communication of Flood Risks: A Systematic Review of Empirical Research
—Wim Kellens, Teun Terpstra, and Phillipe De Maeyer (2013)

A literature review of risk perception and risk communication research. The authors conclude that the majority of the studies are of exploratory nature and have not applied any frameworks that are available in social science research. They make recommendations for future research.

Source: http://dx.doi.org/10.1111/j.1539-6924.2012.01844.x

Keywords: communication

Perception of Risk
—Paul Slovic (1987)

A paper that provides a basis for understanding and anticipating public responses to hazards and suggests improvements of the communication of risk information across audiences. It covers topics such as revealed and expressed preferences, factor-analytic representations, and forecasting public acceptance.

Source: http://socsci2.ucsd.edu/~aronatas/project/academic/risk%20slovic.pdf

Keywords: communication

Plan, Prepare, Mitigate
—FEMA (2015)

A hub of FEMA webpages with information regarding home, business, and community protection, preparedness and preparedness grants, and hazard mitigation assistance.

Source: https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning

Keywords: communication

Planning for Changing Sea Levels Detailed Tool
—FEMA

A webpage that explains how users in New York and New Jersey can use the FEMA Flood Hazard Resources Maps to understand some potential future vulnerabilities to changing sea levels.

Source: https://www.usace.army.mil/corpsclimate/Planning_for_Changing_Sea_Levels.aspx

Keywords: communication

Potential effects of anticipated sea level change to coastal communities by 2100
—USACE North Atlantic Division

An animation showing types of potential effects that may occur in coastal communities by 2100 due to anticipated sea level change.

Source: http://www.nad.usace.army.mil/portals/40/siteimages/NACCS/SLR_1-600.gif

Keywords: communication

Prepare Your Organization for a Flood Playbook
—FEMA: America's PrepareAthon! (2014)

This FEMA guide is intended for community leaders and employers. It provides tools and resources to support flood event preparedness efforts in their organizations and help conduct a "PrepareAthon! Day of Action." A "Day of Action" can include discussions and drills to explain workplace plans and policies and to motivate employees or other members of a given organization to be better prepared at home.

Source: http://www.fema.gov/media-library-data/1409930512086-e6a6bd53bf0cc73603f0a28771137cb3/prepareathon_playbook_flood_final_090414_508.pdf

Keywords: communication

Principles of Risk Analysis for Water Resources
— USACE Institute for Water Resources (2017)

The purpose of this manual is to articulate for USACE and all of its stakeholders the risk analysis process used by USACE in its Civil Works program. The primary audience for this manual is the workforce of the U.S. Army Corps of Engineers. Its secondary audiences include those affected by the Civil Works program as well as those who work closely with USACE in support of their mission.

Source file: https://www.iwrlibrary.us/document/deacd6fd-67d7-4c70-e21e-9c6ccc5bc4ba (Series)

Keywords: Corps applications, assessment, communication, management, risk analysis

Projected coastal flood increases (2018 to 2118)
—USACE North Atlantic Division

This gif depicts two graphs that reveal projected coastal flood increases from 2018 to 2118.

Source: http://www.nad.usace.army.mil/portals/40/siteimages/NACCS/wc_2.gif

Keywords: communication

Provisionally Accredited Levees
—FEMA (2012)

This is a factsheet from FEMA discussing the Provisionally Accredited Levee (PAL) designation, which FEMA established to help facilitate the levee accreditation process. The document discusses how PAL designations affect communities and what happens if a levee system meets PAL requirements, among other topics.

Source: http://www.fema.gov/media-library-data/20130726-1531-20490-1102/provisionally_accredited_levees.pdf

Keywords: communication

Public Perception of the Risks of Floods: Implications for Communication
—Tamara R. Lave and Lester B. Lave (1991)

Although this paper explores issues more directly relating to FEMA, it does explore what people do and do not understand about flood risks and how that impacts their ability to plan and take action.

Source: http://dx.doi.org/10.1111/j.1539-6924.1991.tb00602.x

Keywords: communication

Public Perception of the Risks of Floods: Implications for Communication, Risk Analysis Journal
—Tamara R. Lave; Lester B. Lave (1991)

Describes how current government publications about flood risks are not likely to be understood by those at risk shown by the surveys conducted.
Source: https://pubmed.ncbi.nlm.nih.gov/1876725/

Keywords: professional organizations, communication

Ready.gov Kids: Floods
—Ready.gov

This webpage is a child-friendly resource describing what floods are, flood risk, and actions that should be taken before, during, and after a flood.

Source: https://www.ready.gov/kids/disaster-facts/floods

Keywords: communication

Ready.gov Kids: Hurricanes
—Ready.gov (2015)

This webpage is a child-friendly resource describing what hurricanes are, the risks from hurricanes, and actions that should be taken before, during, and after a hurricane.

Source: https://www.ready.gov/kids/disaster-facts/hurricanes

Keywords: communication

Rich Smith Flood Story
—Floodtools.com (2012)

A testimonial video of a homeowner who discusses the importance of having flood insurance as he rebuilds his home after a flood.

Source: https://www.youtube.com/watch?v=ORVeqquoPkE

Keywords: communication

Risk Analysis, An International Journal
—Wiley-Blackwell (Society for Risk Analysis)

This website provide information on the International Journal, "Risk Analysis".

Source: http://www.wiley.com/WileyCDA/WileyTitle/productCd-RISA.html

Keywords: professional organizations, assessment, communication, management, risk analysis

Risk as Analysis and Risk as Feeling: Some Thoughts about Affect, Reason, Risk, and Rationality, Risk Analysis Journal
—Paul Slovic; Melissa L. Finucane; Ellen Peters; Donald G. MacGregor (Risk Analysis Journal)

The study discusses how people reason and use emotions and how to convey risk messages through these scientific processes in the mind.

Keywords: professional organizations, communication

Risk Behavior and Risk Communication: Synthesis and Expert Interviews
—Betty H. Morrow for NOAA (2009)

A thorough report covering how and why the public perceives risk in certain ways, makes decisions about risk, and accepts and responds to risk. Risk communication and management is also covered.

Source: https://coast.noaa.gov/data/digitalcoast/pdf/risk-behavior.pdf

Keywords: communication

Risk Communication Basics
(2016)

Risk Communication Basics is the ninth in a series of publications developed to bring information to coastal managers about the use of social science tools in their field of work. This document shares insights into why people respond to risk the way they do. Coastal managers will find examples and tips for working with residents to explore solutions and make decisions to improve the resilience of coastal communities. This material is linked to the interactive training webinar provided by the Office for Coastal Management, Seven Best Practices for Risk Communication (see coast.noaa.gov/digitalcoast/training/risk-communication). This guidebook was developed through a partnership of the NOAA Office for Coastal Management and the

Jacques Cousteau National Estuarine Research Reserve, with contractor Sarah Watson, graduate student at Rutgers University.

Source: https://coast.noaa.gov/data/digitalcoast/pdf/risk-communication-basics.pdf

Keywords: communication

Risk Communication in Emergency Response to a Simulated Extreme Flood
—Simon McCarthy, Sylvia Tunstall, Dennis Parker, Hazel Faulkner and Joe Howe (2007)

A discussion of a range of new models and tools that could be beneficial for flood incident management, based on a study in the Thames Estuary, United Kingdom.

Source: http://eprints.mdx.ac.uk/293/1/r1217032.pdf%5B1%5D.pdf

Keywords: communication

Risk Communication Series: Boosting Local Preparedness – Stories from the Georgia Hurricane Evacuation Study and the Northwest Flood Fighting Workshops
—USACE Learning Center (2014)

This webinar, part of the US Army Corps of Engineers' Flood Risk Communication Webinar Series, discusses the activities and results from two projects in IWR's Public Involvement in Flood Risk Management Pilot Program. The speakers detail best practices and lessons learned from the pilot projects.

Source: https://www.iwr.usace.army.mil/Missions/Risk-Analysis/Risk-Analysis-Gateway/Learning-Center/Webinars/

Keywords: communication

Risk Communication Series: DSAC I, 100-Year Floods and Other Myths
—USACE Learning Center (2014)

This webinar, part of the US Army Corps of Engineers' Flood Risk Communication Webinar Series, features speaker Charlie Yoe, PhD, discussing risk communication and public perception of risk.

Source: https://www.iwr.usace.army.mil/Missions/Risk-Analysis/Risk-Analysis-Gateway/Learning-Center/Webinars/

Keywords: communication

Risk Communication Series: From Flood Damage Reduction to Flood Risk Management – Implications for USACE Policy and Programs
—USACE Learning Center (2014)

This webinar, part of the US Army Corps of Engineers' Flood Risk Communication Webinar Series, discusses the results of a study that sought to identify policy & legislative changes that would allow USACE to be more effective in working with other federal & non-federal agencies and stakeholders in the management of flood risk.

Source: https://www.iwr.usace.army.mil/Missions/Risk-Analysis/Risk-Analysis-Gateway/Learning-Center/Webinars/

Keywords: communication

Risk Communication Series: National Flood Risk Awareness Survey 2013 Results
—USACE Learning Center (2014)

This webinar, part of the US Army Corps of Engineers' Flood Risk Communication Webinar Series, discusses the results of the National Flood Risk Awareness Survey from 2013. The speakers offer some key takeaways, including the idea that communication should bridge the gap in perception between community risk and household risk.

Source: https://www.iwr.usace.army.mil/Missions/Risk-Analysis/Risk-Analysis-Gateway/Learning-Center/Webinars/

Keywords: communication

Risk World
— Tec-Com Inc.

The website contains information on news, books, resources, jobs, publications, software and more on risk. The topics include everything from hurricanes, bioterrorism, business, risk in everyday life, risk management, and more.

Source: http://www.riskworld.com/

Keywords: professional organizations, assessment, communication, management, risk analysis

Safety of Dams- Policy and Procedures
—USACE (2014)

This USACE regulation discusses the Dam Safety Program and the Dam Safety Program Framework.

Source:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1110-2-1156.pdf
Keywords: communication

Sandbagging
—USACE (2009)

A USACE St. Paul District video that explains how to build an effective sandbag levee, as well as how to manage the seepage that occurs.

Source: https://www.youtube.com/watch?v=rj7aUwIHYlw&feature=channel_page

Keywords: communication

Shore Protection Assessment: Beach Nourishment: How Beach Nourishment Projects Work — USACE Coastal and Hydraulics Laboratory, Engineer Research and Development Center (2007)

A USACE document that describes why healthy beaches are important to the nation, how beaches function as a system, why beach erosion is a threat to coastal communities, and what shore protection projects entail.

Source:
http://www.nan.usace.army.mil/Portals/37/docs/civilworks/SandyFiles/HowBeachNourishmentWorks.pdf

Keywords: communication

So, You Live Behind a Levee!
—ASCE (2009)

A document for members of the public living near levees, emphasizing the inevitability of flooding, risks associated with flooding, the idea that no levee is flood-proof, and actions that homeowners should take now to save lives and property.

Source: http://ascelibrary.org/doi/book/10.1061/9780784410837

Keywords: communication

Social Vulnerability Analysis: A Comparison of Tools
—USACE (2013)

A USACE White Paper that provides the rational for the choice of the Social Vulnerability Index as the foundational method for characterizing social vulnerability as employed in the 2011 IWR handbook on social vulnerability analysis.

Source: https://www.iwrlibary.us/document/91a1cc9f-2b59-451c-ec12-d0374d59883a

Keywords: communication

Society for Risk Analysis
— Society for Risk Analysis

The Society for Risk Analysis is a multidisciplinary, interdisciplinary, scholarly, international society that provides an open forum for all those who are interested in risk analysis. Risk analysis is broadly defined to include risk assessment, risk characterization, risk communication, risk management, and policy relating to risk, in the context of risks of concern to individuals, to public and private sector organizations, and to society at a local, regional, national, or global level.

Source: http://www.sra.org

Keywords: professional organizations, assessment, communication, management, risk analysis

Step Down Diagram
—USACE IWR

This IWR webpage includes a graphic of the step down diagram as well as a description of shared responsibility.

Source: https://www.iwr.usace.army.mil/Missions/FloodRiskManagement/FloodRiskManagementProgram/PartnersinSharedResponsibility.aspx

Keywords: communication

Surviving the Storm, Rebuilding Together: FEMA officials and their partners discuss the unique risks associated with levees
—FloodSmart.Gov, National Flood Insurance Program

This is a video produced by the National Flood Insurance Program with insights about levee risks and actions the public can take to reduce this risk.

Source: https://www.youtube.com/watch?v=MEN_0ddjW_A

Keywords: communication

TED Talk: "Talk Nerdy to Me"
—Melissa Marshall (2012)

This is a TED talk by Melissa Marshall, a communications teacher who discusses the importance of scientists presenting complex scientific ideas to general audiences in an understandable way.

Source: http://www.ted.com/talks/melissa_marshall_talk_nerdy_to_me

Keywords: communication

Terrorists Vs. Bathtubs
—On the Media (2013)

A podcast featuring risk analyst Peter Sandman. He explains that it is not very persuasive to communicate comparisons between different risks.

Source: http://www.onthemedia.org/story/300750-terrorists-versus-bath-tubs/

Keywords: communication

Understanding Flood Risk Decisionmaking: Implications for Flood Risk Communication Program Design
—Carolyn Kousky and Leonard Shabman (2015)

In an effort to inform flood risk communication programs, the authors of this paper delve into how individuals make decisions regarding floodplain land-use.

Source: https://www.rff.org/publications/working-papers/understanding-flood-risk-decisionmaking-implications-for-flood-risk-communication-program-design/

Keywords: communication

Understanding Flood Risk in the Delaware River Basin: Chapter 1: Terrain, Geography And Flood Risk
—The Nurture Nature Center: Focus on Floods (2010)

A website and video that explains in general terms how floods occur in the Delaware River Basin. It explains details weather patterns, topography and other factors that determine flood risk. While the examples are specific to the Delaware River Watershed, the general concepts are relevant to any river or watershed.

Source: http://focusonfloods.org/flood-science-and-technology/chapter-1-understanding-flood-risk

Keywords: communication

Understanding Flood Risk in the Delaware River Basin: Chapter 2: Climate and Weather Impacts on Flood Risk
—The Nurture Nature Center: Focus on Floods (2011)

This website and video provide a short explanation of whether floods are becoming more frequent in the Delaware River Basin. The video and accompanying webpage text more generally cover the difference between weather and climate.

Source: http://focusonfloods.org/flood-science-and-technology/chapter-2-understanding-flood-risk

Keywords: communication

Understanding Flood Risk in the Delaware River Basin: Chapter 3: Hydrology and the "100-Year-Flood"
—The Nurture Nature Center: Focus on Floods (2012)

Website featuring a video of Dr. Dru Germanoski explaining the concept of the "100-year" flood and putting the concept in a larger context. He explains that smaller floods can occur quite frequently and that the 100-year regulatory floodplain is not necessarily a good gage of flood risk for any given property owner. This video uses examples from the Delaware River Basin and some technical language (e.g., discharge) is used.

Source: http://focusonfloods.org/flood-science-and-technology/chapter-3-understanding-flood-risk

Keywords: communication

Understanding Flood Risk in the Delaware River Basin: Chapter 4: Flood Alerts and Warning Technology
—The Nurture Nature Center: Focus on Floods (2013)

A website and video that explains how different parts of NOAA monitor and predict floods and how individuals can sign up for automatic flood alerts sent via email or text.

Source: http://focusonfloods.org/flood-science-and-technology/chapter-4-understanding-flood-risk

Keywords: communication

Understanding Flood Risk in the Delaware River Basin: Chapter 5: Easton, PA Raises Its Standards
—The Nurture Nature Center: Focus on Floods (2014)

A description of how one community (Easton, Pennsylvania) changed land use policies in order to reduce flood risk after several damaging flood events occurred three years in a row.

Source: http://focusonfloods.org/flood-science-and-technology/chapter-5-understanding-flood-risk

Keywords: communication

Understanding Flood Risk in the Delaware River Basin: Chapter 6: The Prepared Citizen: Are You Ready?
—The Nurture Nature Center: Focus on Floods (2010)

A website and video showing how one resident along the banks of Delaware River monitors and prepares for potential flood events to protect his property and the safety of his family. The examples described can be applied to almost any resident living near a river.

Source: http://focusonfloods.org/flood-science-and-technology/chapter-6-understanding-flood-risk

Keywords: communication

Understanding Risk Communication Best Practices: A Guide for Emergency Managers and Communicators
—National Consortium for the Study of Terrorism and Responses to Terrorism (2012)

A report that discusses creating and disseminating effective risk messages. Elements such as risk-related emotions and public proximity to risk are discussed, among others. The article highlights effective methods of reaching out to underserved or disabled populations.

Source: http://www.start.umd.edu/sites/default/files/files/publications/UnderstandingRiskCommunicationBestPractices.pdf

Keywords: communication

Understanding Risk Communication Theory: A Guide for Emergency Managers and Communicators
—National Consortium for the Study of Terrorism and Responses to Terrorism (2012)

This document defines risk communication, explains risk characteristics, and discusses various risk communication theories and models. The theories and models are discussed in two groups: those that cross-cut the phases of risk management (preparedness, response, and recovery) and others that are specific to certain phases.

Source: https://www.start.umd.edu/sites/default/files/files/publications/UnderstandingRiskCommunicationTheory.pdf

Keywords: communication

The Unified Hazard Mitigation Assistance Grant Programs
—FloodSmart.Gov, National Flood Insurance Program (2013)

This factsheet provides an overview of the Department of Homeland Security Federal Emergency Management Agency Hazard Mitigation Assistance programs, which aim to reduce the risk to individuals and property from natural hazards while simultaneously reducing reliance on Federal disaster funds.

Source: https://www.fema.gov/media-library/assets/documents/103339

Keywords: communication

USACE Dam Safety Program Website
—USACE

A hub of resources for the USACE Dam Safety Program. It links to information about program activities, facts and figures, program principles, and key documents, among other resources.

Source: https://www.usace.army.mil/Missions/CivilWorks/DamSafetyProgram.aspx

Keywords: communication

USACE Flood Risk Management Frequently Asked Questions
—USACE (2010)

A USACE document that provides Flood Risk Managers with talking points for frequently asked questions relating to the USACE Flood Risk Management Program, national associations, national committees, and USACE flood risk management authorities, among other topics.

Source:
https://www.iwrlibrary.us/document/0dcd17fa-8366-4761-aeb9-788551187d27

Keywords: communication

USACE Flood Risk Management Program (FRMP)
—USACE Flood Risk Management Program (2016)

This IWR webpage provides a basic description of what floodplain management is, the history of the USACE FRMP is, a description of the Silver Jackets program, and why USACE chose the name "Silver Jackets."

Source:
https://www.iwr.usace.army.mil/Missions/FloodRiskManagement/FloodRiskManagementProgram/FrequentlyAskedQuestions/faqFRMP.aspx

Keywords: communication

USACE Levee Safety Program Website
—USACE

A hub of resources for the USACE Levee Safety Program. It links to information about the program, the National Levee Database, and descriptions of levee inspections, among other resources.

Source: https://www.usace.army.mil/Missions/CivilWorks/LeveeSafetyProgram.aspx

Keywords: communication

USACE Natural Resource Management Gateway: Find a Facilitator
—USACE (2013)

A database that provides contact information for individuals within USACE who have experience in facilitation and are willing to provide that service.

Source: https://corpslakes.erdc.dren.mil/employees/facilitator/find.cfm

Keywords: communication

USACE Risk Analysis Gateway: Risk Communication Online Training
—USACE

This USACE training features information on defining risk communication, determining what should be considered when tailoring messages, and distinguishing the characteristics that affect risk perception, among other topics.
(http://www.corpsriskanalysisgateway.us/lms/course.cfml?crs=1&crspg=1)

Keywords: communication

The Use of Social Media in Risk and Crisis Communication
—OECD Working Papers on Public Governance (2013)

A paper that explains how social media can be a beneficial tool for risk and crisis communicators.

Source: http://www.oecd-ilibrary.org/governance/the-use-of-social-media-in-risk-and-crisis-communication_5k3v01fskp9s-en

Keywords: communication

Using Pumps to Protect Property During a Flood
—USACE Corps Connection (2009)

A USACE St. Paul District video that explains how pumps can help manage seepage that comes through a sandbag levee.

Source: https://www.youtube.com/watch?v=gxKcXC8FEQ4&feature=channel

Keywords: communication

Using the National Flood Hazard Layer Web Map Service (WMS) in Google Earth
—FEMA (2015)

A FEMA webpage featuring instructions for using the WMS in Google Earth, including descriptions and kmz downloads of the "Stay Dry" application, which provides basic flood hazard map information from FEMA, and the "FEMA NFHL" application, which displays flood hazard zones and labels.

Source: https://hazards.fema.gov/femaportal/wps/portal/NFHLWMSkmzdownload

Keywords: communication

Visualizing flood forecasting uncertainty: some current European EPS platforms - COST731 working group 3
—M. Bruen, P. Krahe, M. Zappa, J. Olsson, B. Vehvilainen, K. Kok, and K. Daamen (2010)

The authors took examples of hydrometeorological observations, models, and forecasts from various European countries to study how uncertainty information is presented to and used by the end-user. Their findings indicate that end-users do find the information useful. They suggest that meetings between forecasting organizations and recipients of the forecasts would be useful in helping to improve how uncertainties are presented to the public.

Source: http://www.econbiz.de/Record/visualising-flood-forecasting-uncertainty-some-current-european-eps-platforms-cost731-working-group-3-bruen-michael/10009475683

Keywords: communication

Water Watch
—USGS (2015)

USGS's resource that displays maps, graphs, and tables describing real-time, recent, and past streamflow for the United States. USGS generally updates the information on an hourly basis.

Source: http://waterwatch.usgs.gov/

Keywords: communication

West Coast Rainy Season Flood Risk
—FloodSmart.Gov, National Flood Insurance Program (2013)

A National Flood Insurance Program factsheet that describes the rainy season on the West Coast and the flood risks this season presents, including flash floods, mudflows, and floods after wildfires.

Source: https://www.fema.gov/media-library/assets/documents/31975

Keywords: communication

The Wharton School, Risk Management and Decision Processes Center
— University of Pennsylvania

The Wharton Risk Management and Decision Processes Center is a nexus of people and projects devoted to furthering the practical understanding of how to manage situations of risk involving health, safety, and the environment in both the private and public sectors of our society. The Center does research into the management of low-probability/high-consequence events. In addition to working on programs of basic and applied research, Risk Center faculty serve on national and international advisory committees, with partnerships in government, academia, industry, and NGOs.

Source: http://riskcenter.wharton.upenn.edu/

Keywords: academia, assessment, communication, management

What is a Levee?
—FEMA (2012)

A factsheet that provides a basic description of levees and levee systems, and how people living near a levee can prepare themselves for a flood.

Source: https://www.fema.gov/media-library/assets/documents/22951

Keywords: communication

What is a Slurry Wall?
—USACE: Sacramento District (2012)

A short video produced by Sacramento District describing what a seepage wall is and how slurry is created.

Source: https://www.youtube.com/watch?v=3KdUgIxGmiA

Keywords: communication

What's to Loose?- (3rd tab)
—Floodtools.com (2014)

A simulator that allows users to input the square footage of and number of levels in their home, as well as the estimated monetary value of possessions, to calculate estimated possible losses from a flood.

Source: http://www.floodtools.com/Home.aspx

Keywords: communication

Why get flood insurance? FEMA and the Insurance Information Institute discuss the importance of flood insurance
—FloodSmart.Gov, National Flood Insurance Program

A National Flood Insurance Program video that discusses reasons why homeowners in flood risk areas should purchase flood insurance.

Source: https://www.floodsmart.gov/flood-insurance/why

Keywords: communication

Winter Flood Risk
—FloodSmart.Gov, National Flood Insurance Program (2013)

A National Flood Insurance Program factsheet that details flooding risks in the winter. Causes of flooding briefly described include ice jams, snowmelt, and coastal flooding.

Source: https://www.fema.gov/media-library-data/1459189789918-a77ac65fa20237a76f195d5ab1c0b579/FloodRisksWinterFlooding_09_2015.pdf

Keywords: communication

You Have Been Framed! How Antecedents of Information Mediate the Effects of Risk Communication Messages
—T. Terpstra, R. Zaalberg, J. de Boer, and W.J.W Botzen (2014)

This paper looks at how the use of framing impacts people's information needs regarding flood risks. The authors explain that communication messages will be more effective when they stimulate risk perceptions and evoke negative effect. However, the arousal of fear can have unwanted side effects which could lower levels of trust in risk management. Of note is that there are likely differences in the trust and perceived expertise of the Netherlands government regarding these issues vs U.S. citizens trust in USACE or FEMA.

Source: http://dx.doi.org/10.1111/risa.12181

Keywords: communication

Corps Applications

Application of Cost Risk Analysis Methods to Develop Contingencies for Civil Works Total Project Costs, Corps Engineering and Construction Bulletin
— U.S. Army Corps of Engineers (2007)

Application of Cost Risk Analysis Methods to develop contingencies for Civil Works Total Project Costs.

Source file: https://www.iwrlibrary.us/document/0d509fe5-c017-4725-d3eb-01ce29e28ec0 (Series)

Keywords: Corps applications, assessment

Beach-fx: Monte Carlo Life-Cycle Simulation Model for Estimating Shore Protection Project Evolution Cost and Benefit Analysis
—Mark B. Gravens; Richard M. Males; David A. Moser, PhD (U.S. Army Engineer Research & Development Center, Coastal and Hydraulics) (2006)

Describes the Beach-fx model as a way of estimating beach nourishment project costs and benefits over the project life.

Source file: https://www.iwrlibrary.us/document/67adfca5-8699-4341-8772-8ab1f65669e9 (Series)

Keywords: Corps applications, assessment

Decision Making Under Uncertainty
—Martin T. Schultz; Kenneth N. Mitchell; Brian K. Harper; Todd S. Bridges (U.S. Army Engineer Research & Development Center) (2010)

This report introduces concepts, principles, and approaches for addressing uncertainty in decision making. The sources of uncertainty in decision making are discussed, emphasizing the distinction between uncertainty and risk, and the characterization of uncertainty and risk. The report provides a brief overview of decision theory and presents a practical method for modeling decisions under uncertainty and selecting decision alternatives that optimize the decision maker's objectives.

Source : https://www.iwrlibrary.us/document/3b7f4958-4c6a-4809-b8b7-e0f154b5c1c9 (Series)

Keywords: Corps applications, assessment, management

Documentation and Demonstration of a Process for Risk Analysis of Proposed Modification to the Sacramento River Flood Control Project (SRFCP) Levees
—WEST Consultants, Inc. (USACE Hydrologic Engineering Center) (2009)

This document provided a probabilistic analysis tools in a system-wide context to assess performance from modifications to project levees.

Source: http://www.hec.usace.army.mil/publications/ProjectReports/PR-71.pdf

Keywords: Corps applications, assessment

EM 1110-2-1619: Risk-Based Analysis for Flood Damage Reduction Studies
— U.S. Army Corps of Engineers (1996)

Procedures described lead to estimation of expected benefits of proposed flood damage reduction plans using risk and uncertainty analysis.

Source: https://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM_1110-2-1619.pdf

Keywords: Corps applications, assessment

ERDC/CHL SR-07-01: Theoretical Underpinnings of the Other Social Effects Account
—Mark C. Dunning, PhD; Susan E. Durden (U.S. Army Corps of Engineers) (2007)

Describes the Other Social Effects account in project analysis for the Corps of Engineers and why it is important to take into account these effects. Safety and risk is discussed.

Source file: https://www.iwrlibrary.us/document/58196cc6-8679-4fce-af99-2316702653d6 (Series)

Keywords: Corps applications

Hydrologic Engineering Center, U.S. Army Corps of Engineers
— USACE Hydrologic Engineering Center

The Hydrologic Engineering Center (HEC), an organization within the Institute for Water Resources, is the designated Center of Expertise for the US Army Corps of Engineers in the technical areas of surface and groundwater hydrology, river hydraulics and sediment transport, hydrologic statistics and risk analysis, reservoir system analysis, planning analysis, real-time water control management and a number of other closely associated technical subjects. This website has the latest software releases from HEC and many consider risk. (http://www.hec.usace.army.mil/)

Keywords: Corps applications, software

Hydrology and Hydraulics Workshop on Riverine Levee Freeboard, 1991
— USACE Hydrologic Engineering Center (1991)

This report summarizes a conference that looked at identifying issues related to riverine levee height.

Source file: https://www.iwrlibrary.us/document/efbc94fc-914d-453d-a8d0-b1899ddac9cc (Series)

Keywords: Corps applications, assessment

Incorporating Complexity and Uncertainty in Planning Models for Engineering, Journal of Contemporary Water Resources and Education
—Mark B. Gravens; Keith Hofseth; Richard M. Males; David A. Moser, PhD; Cory Rogers (USACE Navigation Economic Technologies) (2008)

Describes how the Corps has pursued the development of Monte Carlo simulation models as a key strategy for performing uncertain and complex analysis in navigational studies.

Source file: https://www.iwrlibrary.us/document/5d8822a3-0714-4ab5-9441-6b9ac29d35e2 (Series)

Keywords: Corps applications, professional organizations, assessment

Incorporation Risk and Uncertainty into Environmental Evaluation: An Annotated Bibliography
—Charles E. Yoe, PhD (USACE Institute for Water Resources) (1996)

Serves as both a primer on the generic risk analysis literature that will help planners find the tools they need to do risk analysis, as well as a gateway to help more experienced personnel find their way into the environmental resource risk analysis literature.

Source file: https://www.iwrlibrary.us/document/a82cfa88-6f8b-4c5f-8a3c-ab9bc8d209dd (Series)

Keywords: Corps applications, assessment, communication, management

Is the Current Approach to Managing Flood Threats in the United States Sustainable?
—Darryl W. Davis, USACE IWR (American Society of Civil Engineers) (2007)

While at the forefront of providing a comprehensive approach to managing flood threats in the mid-20th century, there is increasingly substantial evidence that the present approach of the United States is not sustainable from perspectives of public safety and economic and environmental consequences.

Source: http://ascelibrary.org/doi/abs/10.1061/40927%28243%29253

Keywords: Corps applications, professional organizations, management

IWR 00-R-10: Methods for Expert-Opinion Elicitation of Probabilities and Consequences for Corps Facilities
—Bilal M Ayyub, PhD, PE (USACE Institute for Water Resources) (2000)

The purpose of this research project was to provide methods for expert-opinion elicitation of probabilities and consequences for Corps facilities for the use of planners, engineers, and others. The report consists of six chapters, references, and acknowledgements. The chapters provide a technical discussion of statistical terms and concepts; detailed discussion of experts and the expert elicitation process followed by an example of processes with results.

Source: https://www.iwrlibrary.us/document/e0193edd-0286-4beb-946d-70c6727b2bba

Keywords: Corps applications, assessment

IWR 00-R-3: Analyzing Uncertainty in the Costs of Ecosystem Restoration
—Benjamin D. Noble; Ronald M. Thom; Thomas H. Green; Amy B. Borde (Battelle) (U.S. Army Corps of Engineers) (2000)

This report summarizes the findings of a preliminary effort to examine the factors that contribute to the differences between projected costs and actual expenditures, and to identify ways to reduce the uncertainty associated with the costs of habitat restoration projects.

Source: https://www.iwrlibrary.us/document/33b9ac77-ef7c-4f80-9699-d2537defbbf4

Keywords: Corps applications, assessment

IWR 00-R-9: Risk Analysis Framework for Cost Estimation
—Charles E. Yoe, PhD (USACE Institute for Water Resources) (2000)

The purpose of this report is to demonstrate the feasibility of using risk analysis to improve both the process of cost estimating and the quality of the cost estimates. Case examples are various types of Corps projects.

Source: https://www.iwrlibrary.us/document/4be770de-6e95-4b61-aebe-eb55649255bd

Keywords: Corps applications, assessment

IWR 01-R-01: A Practical Guide on Conducting Expert-Opinion Elicitation of Probabilities and Consequences for Corps Facilities
—Bilal M Ayyub, PhD, PE (USACE Institute for Water Resources) (2001)

The purpose of this research project was to define techniques for eliciting expert opinion on possible events and their consequences for Corps facilities for use by planners, engineers, and others. The report consists of three chapters, a bibliography, and three appendices. The chapters provide a practical discussion of terms and concepts; detailed discussion of the expert elicitation process followed by an example of processes with results. Appendices provided

detailed discussion of pertinent statistical nomenclature, failure consequences, and heuristics, elicitation, scoring, and aggregation of data.

Source: https://www.iwrlibrary.us/document/e1183c37-8ca5-4265-b229-662874852e23

Keywords: Corps applications, assessment

IWR 02-R-1: Ecosystem Restoration Cost Risk Assessment
—Charles E. Yoe, PhD, Planning and Management Consultants. Ltd. (USACE Institute for Water Resources) (2001)

Uses risk assessment techniques to the estimate of project costs for a Section 206 Study to restore the in-stream riparian habitat for the brown trout and other species to ecologically sustainable levels along Seeley Creek.

Source: https://www.iwrlibrary.us/document/eaf73feb-5204-4693-b95a-2bf41c9e2c17

Keywords: Corps applications, assessment

IWR 92-R-1: Guidelines for Risk and Uncertainty Analysis in Water Resources Planning: Volume I
—The Greeley-Polhemus Group, Inc. (USACE Institute for Water Resources) (1992)

The Heck Valley Flood Control Case Study is a hypothetical study that uses real data from Corps' projects wherever possible to assess and manage risk within corps navigation and flood damage reduction projects.

Source: https://www.iwrlibrary.us/document/f22d454b-04ed-4cc7-9eca-05a0d66e1c0f

Keywords: Corps applications, assessment, management

IWR 92-R-2: Guidelines for Risk and Uncertainty Analysis in Water Resources Planning: Volume II
—The Greeley-Polhemus Group, Inc. (USACE Institute for Water Resources) (1992)

The Heck Valley Flood Control Case Study is a hypothetical study that uses real data from Corps' projects wherever possible to assess and manage risk within corps navigation and flood damage reduction projects.

Source: https://www.iwrlibrary.us/document/9afc8a76-30e3-43fa-8e9e-280c9fc86e2d

Keywords: Corps applications, assessment, management

IWR 96-R-13: Risk Analysis for Dam Safety Evaluation: Hydrologic Risk
—Jery R. Stedinger; David C. Heath; Kay Thompson (USACE Institute for Water Resources) (1996)

The report proposes a method for analyzing hydrologic risk in application to dam safety, and demonstrates through use of a sample analysis.

Source: https://www.iwrlibrary.us/document/6f91cfb1-a060-4390-9f99-fb71486ae4c6

Keywords: Corps applications, assessment

IWR 96-R-14: Applied Risk Communication Within the Corps of Engineers
—Clifford S. Russell; Kevin O'Grady (for USACE IWR) (Virginia Polytechnic Institute and State University) (1996)

Examines the communication of risk information throughout the Corps and communication of risk information with non-Federal project sponsors.

Source: https://www.iwrlibrary.us/document/a2babdf4-7b96-4a0e-a6af-3535f6c42b01

Keywords: Corps applications, communication

IWR 97-R-7: Risk and Uncertainty Analysis Procedures for the Evaluation of Environmental Outputs
—Charles E. Yoe, PhD; Leigh L. Skaggs (USACE Institute for Water Resources) (1997)

A case study is used to illustrate the role that habitat variable measurements play in the uncertainty that attends the estimation of project outputs. The lessons learned during the course of the case study investigation can be grouped into three categories: preparation, data collection and analysis.

Source: https://www.iwrlibrary.us/document/aed163ca-467a-477e-82b0-8ade1790e1c6

Keywords: Corps applications, assessment

IWR 98-R-6: Reliability and Assessment of Hydropower Equipment
—Bilal M Ayyub, PhD, PE; Mark P. Kaminsky; David A. Moser, PhD (USACE Institute for Water Resources) (1998)

The purpose of this research project was to develop and present an assessment methodology for use in producing time-dependent reliability and hazard functions of hydropower equipment. The development of these hydropower reliability functions is a required step in pursuit of conducting the technical and economic analyses necessary to complete a major rehabilitation study.

Source: https://www.iwrlibrary.us/document/b8e450f9-53a9-4dca-a304-69cd3832ad35

Keywords: Corps applications, assessment

IWR 99-R-2: Tools for Risk Based Economic Analysis
—Richard M. Males (USACE Institute for Water Resources) (1999)

The models discussed provide a framework for developing and storing required data, performing the needed calculations, evaluating results, and comparing with- and without-project alternatives from a benefit/cost perspective.

Source: https://www.iwrlibrary.us/document/2b318244-c436-4281-aec7-10ba621fe369

Keywords: Corps applications, assessment

IWR Report 10-R-8: Proceedings of the Workshop Exploration of Tolerable Risk Guidelines for the USACE Levee Safety Program, 17-18 March 2010, Washington
— USACE Institute for Water Resources (2010)

In March 2008, three Federal agencies - US Army Corps of Engineers (USACE), Department of Interior, Bureau of Reclamation, and Federal Energy Regulatory Commission (FERC) convened a workshop entitled "Workshop on Tolerable Risk Evaluation – A step towards developing tolerable risk guidelines for dams and levees". With the formation of the USACE Levee Safety Program (USACE 2007), attention began to be directed toward adapting the newly developed risk-informed dam safety policies and methods for application to levee systems. The National Committee on Levee Safety (NCLS) authorized by the Levee Safety Act of 2007 published its draft recommendations in January 2009 (NCLS 2009) including Recommendation #5 that Tolerable Risk Guidelines (TRG) be developed for application in risk-informed, flood risk management (FRM) associated with levees. This March 2010 workshop constitutes one step in USACE engaging the flood risk management community to work collaboratively in developing policies, TRG, and methods to further levee safety for the nation. The workshop purpose was to examine the concepts and principles.

Source file: https://www.iwrlibrary.us/document/2773b647-73a5-4398-ece5-319e0b90a196 (Series)

Keywords: Corps applications, management

Joint Dam Safety Risk Management Charter - Cooperative Agreement between the Corps and Bureau of Reclamation
— U.S. Bureau of Reclamation, U.S. Army Corps of Engineers

The purpose of this document is to outline the mutual framework for cooperation by the U.S. Army Corps of Engineers (Corps) and the U.S. Bureau of Reclamation (Reclamation) for dam safety risk management activities.

Source: https://www.iwr.usace.army.mil/Portals/70/docs/partners/BURREC-USACE_Partnership_20Feb05.pdf

Keywords: Corps applications, management

Principles of Risk Analysis for Water Resources
— USACE Institute for Water Resources (2017)

The purpose of this manual is to articulate for USACE and all of its stakeholders the risk analysis process used by USACE in its Civil Works program. The primary audience for this manual is the workforce of the U.S. Army Corps of Engineers. Its secondary audiences include those affected by the Civil Works program as well as those who work closely with USACE in support of their mission.

Source: https://www.iwrlibrary.us/document/deacd6fd-67d7-4c70-e21e-9c6ccc5bc4ba (Series)

Keywords: Corps applications, assessment, communication, management, risk analysis

Risk Cost Aspects of Sea Level Rise and Climate Change in the Evaluation of Coastal Protection Projects
—David A. Moser, PhD; Eugene Z. Stakhiv; Limberios Vallianos (USACE Institute for Water Resources, Environmental Protection Agency) (1990)

U.S. Federal coastal protection project planning can incorporate forecasts of sea level rise and storm frequency changes due to climate change through the application of risk and uncertainty analysis techniques. Incorporating future sea level rise and climate change into current projects implies building projects that are too large for existing conditions.

Source: https://www.iwrlibrary.us/document/778cfdc5-be03-494c-cc34-5f3c6bd975de (Series)

Keywords: Corps applications, assessment

Risk Management Framework (A White Paper on the Corps Application)
—Charles E. Yoe, PhD; David A. Moser, PhD (U.S. Army Corps of Engineers) (2008)

This white paper provides a suggested risk management framework for the Corps of Engineers to effectively communicate and manage risk.

Source: https://www.iwrlibrary.us/document/855c3fbe-9025-40eb-b16d-df8384e80967 (Series)

Keywords: Corps applications, management

Scenario-Based Planning and Decision-Making: Guidelines for Use in the U.S. Army Corps of Engineers Planning Studies and Literature Review
—Charles E. Yoe, PhD (U.S. Army Corps of Engineers)

A key argument advanced in this white paper is that the Corps' planning process needs to develop a culture of uncertainty. This entails a recognition of the breadth and extent of the uncertainty encountered in the planning process and an organizational commitment to honestly acknowledging and addressing that uncertainty.

Source: https://www.iwrlibrary.us/document/d1f177c1-a09c-4275-b21b-c72341927b70 (Series)

Keywords: Corps applications, assessment, management

SP-28: Risk-Based Analysis for Flood Damage Reduction Studies, Workshop
—Michael W. Burnham; Darryl W. Davis (USACE Institute for Water Resources) (1997)

Proceedings of a Hydrology and Hydraulics Workshop on Risk-Based Analysis for Flood Damage Reduction Studies in Pacific Grove, California.

Source file: https://www.iwrlibrary.us/document/2914bfac-3ae2-4596-b7f2-3c2a69fe8428 (Series)

Keywords: Corps applications

USACE Dam Safety Action Classification Table and Federal Dam Safety Portfolio Risk Management Process
— U.S. Army Corps of Engineers

Describes dam safety classifications from normal to urgent status. The proposal is a joint process between USACE, USBR, and FERC.

Source file: https://www.iwrlibrary.us/document/15f1d720-60bc-4649-e44a-aa89ec0ce80e

(Series)

Keywords: Corps applications, management

Corps Guidance

Economic and Environmental Principles and Guideline for Water and Related Land Resources Implementation Studies (P&G)
— U.S. Army Corps of Engineers (1983)

Source:
https://planning.erdc.dren.mil/toolbox/library/Guidance/Principles_Guidelines.pdf

Keywords: Corps guidance

EP 1130-2-500: Appendix B, Rehabilitation Evaluation Report
— U.S. Army Corps of Engineers (1996)

Provides guidance for Rehabilitation Evaluation Reports.

Source:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerPamphlets/EP_1130-2-500.pdf
Keywords: Corps guidance, assessment

EP 1130-2-500: Appendix C, Conceptual Approach for Analyzing Rehabilitation
— U.S. Army Corps of Engineers (1996)

This guidance provides a conceptual approach for analyzing rehabilitation. Requires risk-based benefit-cost analysis and criteria.

Source:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerPamphlets/EP_1130-2-500.pdf

Keywords: Corps guidance, assessment

EP 1130-2-500: Appendix E. Benefits Evaluation Procedures
— U.S. Army Corps of Engineers (1996)

The appendix outlines basic procedures that can be used to evaluate rehabilitation for navigation and hydropower project purposes.

Source:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerPamphlets/EP_1130-2-500.pdf

Keywords: Corps guidance, assessment

EP 1130-2-500: Appendix F, Example of Combining Risks and Consequences
— U.S. Army Corps of Engineers (1996)

This guidance provides an evaluation of procedures for major rehabilitation where risk-based benefit-cost analysis is used.

Source:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerPamphlets/EP_1130-2-500.pdf

Keywords: Corps guidance, assessment

ER 1105-2-101: Risk Assessment for Flood Risk Management Studies
(2017)

This regulation provides guidance on risk assessment requirements for flood management studies including but not limited to feasibility studies, post-authorization changes, general reevaluation studies, dam and levee safety studies, and major rehabilitation studies. This regulation is jointly promulgated by Planning and Engineering. The risk framework is a decision-making process that comprises three tasks: risk assessment, risk communication, and risk management, which can be advantageously applied to a variety of water resources management problems. These requirements are part of a broader decision making process that includes similar assessments for risks to the natural environment as well as the social and cultural well-being of people potentially impacted by flood management activities.

Source:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1105-2-101.pdf

Keywords: Corps guidance, assessment

ER 1110-2-1302: Initiatives to Improve Accuracy of Total Project Costs in Civil Works Feasibility Studies Requiring Congressional Authorization
— U.S. Army Corps of Engineers (2008)

This memorandum provides guidance for initiatives to improve the accuracy of total project costs in Civil Works Feasibility Studies.

Source:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1110-2-1302.pdf

Keywords: Corps guidance, assessment

ER 1130-2-500: Chapter 3, Major Rehabilitation Program
— U.S. Army Corps of Engineers

This chapter establishes the policy for major rehabilitation at completed Corps of Engineers projects and determinations of whether such rehabilitation should be accomplished under the Major Rehabilitation Program with Construction, General funds, or for applicable projects, with Construction funds under the Flood Control, Mississippi River and Tributaries appropriation title.

Source:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1130-2-500.pdf

Keywords: Corps guidance, assessment

ER1105-2-100: Planning Guidance Notebook
— U.S. Army Corps of Engineers (2000)

Source:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1105-2-100.pdf

Keywords: Corps guidance

Memorandum - Application of Cost Risk Analysis Methods to Develop Contingencies for Civil Works Total Project Costs
— U.S. Army Corps of Engineers (2007)

This report outlines the application of cost risk analysis to develop contingencies for Civil Works total project costs.

Source file: https://www.iwrlibrary.us/document/0d509fe5-c017-4725-d3eb-01ce29e28ec0

Keywords: Corps guidance, assessment, management

Corps Programs

Corps Cost Engineering Center, Walla Walla District
— U.S. Army Corps of Engineers

Cost Engineering provides the United States Army Corps of Engineers with estimating services for the construction features on all projects from the planning phases through construction, maintenance, and rehabilitation of facilities.

Source: https://www.nww.usace.army.mil/Missions/CostEngineering.aspx

Keywords: Corps programs, assessment

Economics Sub-Community of Practice for Economics, SharePoint Site (USACE access only)
— U.S. Army Corps of Engineers

An interactive forum for Corps economics for posting files, discussions, activities, announcements and more.

Source: https://cops.usace.army.mil/sites/PLAN/econ/default.aspx

Keywords: Corps programs

National Flood Risk Management Program
— U.S. Army Corps of Engineers

This website describes the National Flood Risk Management Program: current issues, guidance, news, regional coordination, partnerships, and levee safety.

Source: https://www.iwr.usace.army.mil/Missions/Flood-Risk-Management/Flood-Risk-Management-Program/

Keywords: Corps programs, assessment, communication, management, risk analysis

National Inventory of Dams
— U.S. Army Corps of Engineers

National Inventory of Dams.

Source: https://nid.sec.usace.army.mil

Keywords: Corps programs, software

National Levee Database
— U.S. Army Corps of Engineers

The National Levee Database (NLD), developed by the U.S. Army Corps of Engineers (USACE), is the focal point for comprehensive information about our nation's levees. Authorized by Congress in 2007, the database contains information to facilitate and link activities, such as flood risk communication, levee system evaluation for the National Flood Insurance Program (NFIP), levee system inspections, flood plain management, and risk assessments. The NLD continues to be a dynamic database with ongoing efforts to add levee data from federal agencies, states, and tribes.

Source: https://levees.sec.usace.army.mil/#/

Keywords: Corps programs, risk analysis

Risk Analysis for Dam Safety, Engineer Research and Development Center (ERDC) Research
— U.S. Army Engineer Research & Development Center

This website describes the research being conducted on dam safety by ERDC.

Source: http://www.erdc.usace.army.mil

Keywords: Corps programs, assessment

USACE Levee Safety Program
—Tammy Conforti (Federal Emergency Management Agency) (2008)

Assess the integrity and viability of levees and recommend actions to assure that levee systems do not present unacceptable risks to the public, property, and the environment.

Source: https://www.iwrlibrary.us/document/e3d7e02f-9871-404f-9aff-5a1179a33a20

(Series)

Keywords: Corps programs, assessment, management

Management

Book Link: At War With the Weather
—Howard C. Kunreuther; Erwann O. Michel-Kerjan (The Wharton School) (2009)

At War with the Weather invites the reader — individuals, business decision makers and government policymakers alike — to a groundbreaking examination into how we currently think about catastrophes, (mis)manage risks, and how financial recovery from natural disasters in the United States must radically change.

Source: https://mitpress.mit.edu/books/war-weather

Keywords: academia, management

Book Link: The Irrational Economist
—Erwann O. Michel-Kerjan; Paul Slovic (The Wharton School) (2010)

The Irrational Economist aims to shed light on some important developments in decision making that have occurred in economics and other social sciences over the past few decades, including some of the most recent discoveries. Book includes examples of communicating high consequence/low probability events.

Source: https://www.goodreads.com/book/show/7182306-the-irrational-economist

Keywords: academia, management

Decision Making Under Uncertainty
—Martin T. Schultz; Kenneth N. Mitchell; Brian K. Harper; Todd S. Bridges (U.S. Army Engineer Research & Development Center) (2010)

This report introduces concepts, principles, and approaches for addressing uncertainty in decision making. The sources of uncertainty in decision making are discussed, emphasizing the distinction between uncertainty and risk, and the characterization of uncertainty and risk. The report provides a brief overview of decision theory and presents a practical method for modeling decisions under uncertainty and selecting decision alternatives that optimize the decision maker's objectives.

Source: https://www.iwrlibrary.us/document/3b7f4958-4c6a-4809-b8b7-e0f154b5c1c9 (Series)

Keywords: Corps applications, assessment, management

Department of Homeland Security
— Department of Homeland Security

Information on counter-terrorism, border security, preparedness, response, recovery, immigration, and more.

Source: http://www.dhs.gov/index.shtm

Keywords: management

The Framework for Environmental Health Risk Management, Volume 1
—Risk World (The Presidential/Congressional Commission on Risk Assessment and Risk Management) (1997)

In Volume 1 of the two-volume Final Report the Commission introduces a unique Risk Management Framework to guide investments of valuable public sector and private-sector resources in researching, assessing, characterizing, and reducing risk.

Source file: https://oaspub.epa.gov/eims/eimscomm.getfile?p_download_id=36372

Keywords: professional organizations, management

GAO-07--412: Port Risk Management: Additional Federal Guidance Would Aid Port in Disaster and Recovery
— General Accounting Agency (GAO)

Report to Congressional Committees.

Source: http://www.gao.gov/new.items/d07412.pdf

Keywords: management

Incorporation Risk and Uncertainty into Environmental Evaluation: An Annotated Bibliography
—Charles E. Yoe, PhD (USACE Institute for Water Resources) (1996)

Serves as both a primer on the generic risk analysis literature that will help planners find the tools they need to do risk analysis, as well as a gateway to help more experienced personnel find their way into the environmental resource risk analysis literature.

Source file: Source: https://www.iwrlibrary.us/document/9d5f236c-bec3-4b6e-939f-2ca9ae930ce6
(Series)

Keywords: Corps applications, assessment, communication, management

Is the Current Approach to Managing Flood Threats in the United States Sustainable?
—Darryl W. Davis, USACE IWR (American Society of Civil Engineers) (2007)

While at the forefront of providing a comprehensive approach to managing flood threats in the mid-20th century, there is increasingly substantial evidence that the present approach of the United States is not sustainable from perspectives of public safety and economic and environmental consequences.

Source: http://ascelibrary.org/doi/abs/10.1061/40927%28243%29253

Keywords: Corps applications, professional organizations, management

IWR 92-R-1: Guidelines for Risk and Uncertainty Analysis in Water Resources Planning: Volume I
—The Greeley-Polhemus Group, Inc. (USACE Institute for Water Resources) (1992)

The Heck Valley Flood Control Case Study is a hypothetical study that uses real data from Corps' projects wherever possible to assess and manage risk within corps navigation and flood damage reduction projects.

Source: https://www.iwrlibrary.us/document/f22d454b-04ed-4cc7-9eca-05a0d66e1c0f

Keywords: Corps applications, assessment, management

IWR 92-R-2: Guidelines for Risk and Uncertainty Analysis in Water Resources Planning: Volume II
—The Greeley-Polhemus Group, Inc. (USACE Institute for Water Resources) (1992)

The Heck Valley Flood Control Case Study is a hypothetical study that uses real data from Corps' projects wherever possible to assess and manage risk within corps navigation and flood damage reduction projects.

Source: https://www.iwrlibrary.us/document/9afc8a76-30e3-43fa-8e9e-280c9fc86e2d

Keywords: Corps applications, assessment, management

IWR Report 10-R-8: Proceedings of the Workshop Exploration of Tolerable Risk Guidelines for the USACE Levee Safety Program, 17-18 March 2010, Washington
— USACE Institute for Water Resources (2010)

In March 2008, three Federal agencies - US Army Corps of Engineers (USACE), Department of Interior, Bureau of Reclamation, and Federal Energy Regulatory Commission (FERC) convened a workshop entitled “Workshop on Tolerable Risk Evaluation – A step towards developing tolerable risk guidelines for dams and levees”. With the formation of the USACE Levee Safety Program (USACE 2007), attention began to be directed toward adapting the newly developed risk-informed dam safety policies and methods for application to levee systems. The National Committee on Levee Safety (NCLS) authorized by the Levee Safety Act of 2007 published its

draft recommendations in January 2009 (NCLS 2009) including Recommendation #5 that Tolerable Risk Guidelines (TRG) be developed for application in risk-informed, flood risk management (FRM) associated with levees. This March 2010 workshop constitutes one step in USACE engaging the flood risk management community to work collaboratively in developing policies, TRG, and methods to further levee safety for the nation. The workshop purpose was to examine the concepts and principles.

Source file: https://www.iwrlibrary.us/document/2773b647-73a5-4398-ece5-319e0b90a196 (Series)

Keywords: Corps applications, management

Joint Dam Safety Risk Management Charter - Cooperative Agreement between the Corps and Bureau of Reclamation
— U.S. Bureau of Reclamation, U.S. Army Corps of Engineers

The purpose of this document is to outline the mutual framework for cooperation by the U.S. Army Corps of Engineers (Corps) and the U.S. Bureau of Reclamation (Reclamation) for dam safety risk management activities.

Source: https://www.iwr.usace.army.mil/Portals/70/docs/partners/BURREC-USACE_Partnership_20Feb05.pdf

Keywords: Corps applications, management

Journal of Risk Research
— Taylor & Francis

The Journal of Risk Research is an international journal that publishes peer-reviewed theoretical and empirical research articles within the risk field from the areas of social, physical and health sciences and engineering, as well as articles related to decision making, regulation and policy issues in all disciplines.

Source: http://www.tandfonline.com/toc/rjrr20/current

Keywords: professional organizations, assessment, communication, management

Managing Large-Scale Risks In a New Era of Catastrophes
—Howard C. Kunreuther; Erwann O. Michel-Kerjan; Neil Doherty; Martin Grace (The Wharton School) (2008)

With a focus on hurricane risk and flood hazard, and on providing protection to homeowners, Managing Large-Scale Risks in a New Era of Catastrophes provides a series of in-depth analyses of the efficiency and equity of current disaster insurance markets and mitigation programs in the United States, the impact of state-based regulations on insurance protection and the loss distributions among different stakeholders.

Source: https://riskcenter.wharton.upenn.edu/wp-content/uploads/2014/07/Wharton_LargeScaleRisks_FullReport_2008.pdf

Keywords: academia, management

Market and Government Failure in Insuring and Mitigating Natural Catastrophes: How Long-Term Contracts Can Help
—Howard C. Kunreuther; Erwann O. Michel-Kerjan (The Wharton School, Risk Managment and Decision Processes Center) (2009)

Source: https://www.researchgate.net/publication/251856915_Market_and_Government_Failure_in_Insuring_and_Mitigating_Natural_Catastrophes_How_Long-Term_Contracts_Can_Help

Keywords: academia, management

Masters in Risk Management
— Masters in Risk Management

Masters in Risk Management provides readers with information available about risk management degrees. Additionally, they hope to offer valuable information about career opportunities and more in this field.

Source: http://www.mastersinriskmanagement.org

Keywords: academia, management

Memorandum - Application of Cost Risk Analysis Methods to Develop Contingencies for Civil Works Total Project Costs
— U.S. Army Corps of Engineers (2007)

This report outlines the application of cost risk analysis to develop contingencies for Civil Works total project costs.

Source file: https://www.iwrlibrary.us/document/0d509fe5-c017-4725-d3eb-01ce29e28ec0

Keywords: Corps guidance, assessment, management

MIL-STD 1629A: Procedures for Performing a Failure Mode, Effects and Criticality Analysis — *Department of Defense (1980)*

This report analyses the failure mode, effects, and criticality analysis (FMECA) as a design tool for maintainability, safety analysis, survivability and vulnerability, logistics support analysis, and for failure detection and isolation subsystem design.

Source: https://www.fmea-fmeca.com/milstd1629.pdf

Keywords: assessment, management

National Flood Risk Management Program
— U.S. Army Corps of Engineers

This website describes the National Flood Risk Management Program: current issues, guidance, news, regional coordination, partnerships, and levee safety.

Source: https://www.iwr.usace.army.mil/Missions/Flood-Risk-Management/Flood-Risk-Management-Program/

Keywords: Corps programs, assessment, communication, management, risk analysis

NOAA Digital Coast

This NOAA-sponsored website is focused on helping communities address coastal issues and has become one of the most-used resources in the coastal management community. The dynamic Digital Coast Partnership, whose members represent the website's primary user groups, keeps the effort focused on customer needs. There are tools and more information on flood risk management.

Source: https://coast.noaa.gov/digitalcoast/

Keywords: software, assessment, communication, management, risk analysis

Principles of Risk Analysis for Water Resources
— USACE Institute for Water Resources (2017)

The purpose of this manual is to articulate for USACE and all of its stakeholders the risk analysis process used by USACE in its Civil Works program. The primary audience for this manual is the workforce of the U.S. Army Corps of Engineers. Its secondary audiences include those affected by the Civil Works program as well as those who work closely with USACE in support of their mission.

Source file: https://www.iwrlibrary.us/document/deacd6fd-67d7-4c70-e21e-9c6ccc5bc4ba (Series)

Keywords: Corps applications, assessment, communication, management, risk analysis

Report on Reclamation Workshop-Review Current Operations Practices
—Carly Jerla; Paul Miller; Thomas Scott; James Prairie (USACE Institute for Water Resources) (2009)

Source: https://www.usbr.gov/research/projects/download_product.cfm?id=138

Keywords: management

Risk Analysis, An International Journal
—Wiley-Blackwell (Society for Risk Analysis)

This website provide information on the International Journal, "Risk Analysis".

Source: http://www.wiley.com/WileyCDA/WileyTitle/productCd-RISA.html

Keywords: professional organizations, assessment, communication, management, risk analysis

The Risk Assessment and Risk Management in Regulatory Decision-Making, Volume 2
— The Presidential/Congressional Commission on Risk Assessment and Risk Management (2007)

In Volume 2 of the two-volume Final Report the Commission discusses issues related to health and environmental risk-based decisions, including recommendations for specific federal regulatory programs and agencies.

Source: http://oaspub.epa.gov/eims/eimscomm.getfile?p_download_id=36372

Keywords: professional organizations, assessment, management

Risk Management Framework (A White Paper on the Corps Application)
—Charles E. Yoe, PhD; David A. Moser, PhD (U.S. Army Corps of Engineers) (2008)

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Keywords: Corps applications, management

Risk World
— Tec-Com Inc.

The website contains information on news, books, resources, jobs, publications, software and more on risk. The topics include everything from hurricanes, bioterrorism, business, risk in everyday life, risk management, and more.

Source: http://www.riskworld.com

Keywords: professional organizations, assessment, communication, management, risk analysis

Scenario-Based Planning and Decision-Making: Guidelines for Use in the U.S. Army Corps of Engineers Planning Studies and Literature Review
—Charles E. Yoe, PhD (U.S. Army Corps of Engineers)

A key argument advanced in this white paper is that the Corps' planning process needs to develop a culture of uncertainty. This entails a recognition of the breadth and extent of the uncertainty encountered in the planning process and an organizational commitment to honestly acknowledging and addressing that uncertainty.

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Keywords: Corps applications, assessment, management

Society for Risk Analysis
— Society for Risk Analysis

The Society for Risk Analysis is a multidisciplinary, interdisciplinary, scholarly, international society that provides an open forum for all those who are interested in risk analysis. Risk analysis is broadly defined to include risk assessment, risk characterization, risk communication, risk management, and policy relating to risk, in the context of risks of concern to individuals, to public and private sector organizations, and to society at a local, regional, national, or global level.

Source: http://www.sra.org

Keywords: professional organizations, assessment, communication, management, risk analysis

USACE Dam Safety Action Classification Table and Federal Dam Safety Portfolio Risk Managment Process
— U.S. Army Corps of Engineers

Describes dam safety classifications from normal to urgent status. The proposal is a joint process between USACE, USBR, and FERC.

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Source: https://www.iwrlibrary.us/document/e3d7e02f-9871-404f-9aff-5a1179a33a20

(Series)

Keywords: Corps programs, assessment, management

USDA: Risk Management Agency
— Risk Management Agency, U.S. Department of Agriculture

The role of USDA's Risk Management Agency (RMA) is to help producers manage their business risks through effective, market-based risk management solutions. RMA's mission is to promote, support, and regulate sound risk management solutions to preserve and strengthen the economic stability of America's agricultural producers. As part of this mission, RMA operates and manages the Federal Crop Insurance Corporation (FCIC). RMA was created in 1996; the FCIC was founded in 1938.

Source: http://www.rma.usda.gov

Keywords: management

The Wharton School, Risk Management and Decision Processes Center
— University of Pennsylvania

The Wharton Risk Management and Decision Processes Center is a nexus of people and projects devoted to furthering the practical understanding of how to manage situations of risk involving health, safety, and the environment in both the private and public sectors of our society. The Center does research into the management of low-probability/high-consequence events. In addition to working on programs of basic and applied research, Risk Center faculty serve on national and international advisory committees, with partnerships in government, academia, industry, and NGOs.

Source: http://riskcenter.wharton.upenn.edu

Keywords: academia, assessment, communication, management

White Paper: Transforming the Corps into a Risk Managing Organization
— USACE Institute for Water Resources (2007)

This paper outlines the scope and depth of change, as called for by the 12 Actions of Change, in order to facilitate the discussions that must take place if change is to be realized.

Source file:
https://www.iwrlibrary.us/document/4480fdb1-7f94-43fb-eb62-37f19a9edd84

(Series)

Keywords: management

Professional Organizations

The Framework for Environmental Health Risk Management, Volume 1
—Risk World (The Presidential/Congressional Commission on Risk Assessment and Risk Management) (1997)

In Volume 1 of the two-volume Final Report the Commission introduces a unique Risk Management Framework to guide investments of valuable public sector and private-sector resources in researching, assessing, characterizing, and reducing risk.

Source: https://oaspub.epa.gov/eims/eimscomm.getfile?p_download_id=36372

Keywords: professional organizations, management

Incorporating Complexity and Uncertainty in Planning Models for Engineering, Journal of Contemporary Water Resources and Education
—Mark B. Gravens; Keith Hofseth; Richard M. Males; David A. Moser, PhD; Cory Rogers (USACE Navigation Economic Technologies) (2008)

Describes how the Corps has pursued the development of Monte Carlo simulation models as a key strategy for performing uncertain and complex analysis in navigational studies.

Source: https://www.iwrlibrary.us/document/5d8822a3-0714-4ab5-9441-6b9ac29d35e2 (Series)

Keywords: Corps applications, professional organizations, assessment

Introducing a Risk Assessment Model for Sport Venues
— U.S. Sports Academy

With the 'unknown certainty' of terrorist actions and fan behavior, it is impossible to ensure a risk-free environment at America's sporting venues. Incidents will happen and emergencies will arise. It is a matter of how one prepares, responds, and recovers to mitigate the consequences of emergencies at a sporting venue. Sport venue managers need to be aware of risk assessment methodologies to detect threats, identify vulnerabilities, and reduce consequences. Information gathered through this process is extremely valuable for enhancing security measures. This article discusses risk assessment and analysis, addresses the need for risk

assessments at sporting venues, and describes the sport-specific risk assessment model developed while conducting research through a Homeland Security grant.

Source: http://thesportjournal.org/article/introducing-a-risk-assessment-model-for-sport-venues/

Keywords: professional organizations, assessment

Is the Current Approach to Managing Flood Threats in the United States Sustainable?
—Darryl W. Davis, USACE IWR (American Society of Civil Engineers) (2007)

While at the forefront of providing a comprehensive approach to managing flood threats in the mid-20th century, there is increasingly substantial evidence that the present approach of the United States is not sustainable from perspectives of public safety and economic and environmental consequences.

Source: http://ascelibrary.org/doi/abs/10.1061/40927%28243%29253

Keywords: Corps applications, professional organizations, management

Journal for Flood Risk Management
— Blackwell Publishing

Journal of Flood Risk Management provides an international platform for knowledge sharing in all areas related to flood risk. Its explicit aim is to disseminate ideas across the range of disciplines where flood related research is carried out and it provides content ranging from leading edge academic papers to applied content with the practitioner in mind.

Source: http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291753-318X

Keywords: professional organizations, risk analysis

Journal of Risk Research
— Taylor & Francis

The Journal of Risk Research is an international journal that publishes peer-reviewed theoretical and empirical research articles within the risk field from the areas of social, physical and health sciences and engineering, as well as articles related to decision making, regulation and policy issues in all disciplines.

Source: http://www.tandfonline.com/toc/rjrr20/current

Keywords: professional organizations, assessment, communication, management

Market Failure in Information: The National Flood Insurance Program, Land Economics Journal
—James Chivers; Nicholas E. Flores (Land Economics Journal) (2002)

Many people living in flood areas are not fully aware of these dangers. This paper discusses this and how the NFIP doesn't provide enough information for homeowners.

Source: https://www.jstor.org/stable/3146850?seq=1#metadata_info_tab_contents

Keywords: professional organizations

Public Perception of the Risks of Floods: Implications for Communication, Risk Analysis Journal
—Tamara R. Lave; Lester B. Lave (1991)

Describes how current government publications about flood risks are not likely to be understood by those at risk shown by the surveys conducted.

Source: https://pubmed.ncbi.nlm.nih.gov/1876725/

Keywords: professional organizations, communication

Risk Analysis, An International Journal
—Wiley-Blackwell (Society for Risk Analysis)

This website provide information on the International Journal, "Risk Analysis".

Source: http://www.wiley.com/WileyCDA/WileyTitle/productCd-RISA.html

Keywords: professional organizations, assessment, communication, management, risk analysis

Risk as Analysis and Risk as Feeling: Some Thoughts about Affect, Reason, Risk, and Rationality, Risk Analysis Journal
—Paul Slovic; Melissa L. Finucane; Ellen Peters; Donald G. MacGregor (Risk Analysis Journal)

The study discusses how people reason and use emotions and how to convey risk messages through these scientific processes in the mind.

Keywords: professional organizations, communication

The Risk Assessment and Risk Management In Regulatory Decision-Making, Volume 2
— The Presidential/Congressional Commission on Risk Assessment and Risk Management (2007)

In Volume 2 of the two-volume Final Report the Commission discusses issues related to health and environmental risk-based decisions, including recommendations for specific federal regulatory programs and agencies.

Source: http://oaspub.epa.gov/eims/eimscomm.getfile?p_download_id=36372

Keywords: professional organizations, assessment, management

Risk World
— Tec-Com Inc.

The website contains information on news, books, resources, jobs, publications, software and more on risk. The topics include everything from hurricanes, bioterrorism, business, risk in everyday life, risk management, and more.

Source: http://www.riskworld.com

Keywords: professional organizations, assessment, communication, management, risk analysis

Society for Risk Analysis
— Society for Risk Analysis

The Society for Risk Analysis is a multidisciplinary, interdisciplinary, scholarly, international society that provides an open forum for all those who are interested in risk analysis. Risk analysis is broadly defined to include risk assessment, risk characterization, risk communication, risk management, and policy relating to risk, in the context of risks of concern to individuals, to public and private sector organizations, and to society at a local, regional, national, or global level.

Source: http://www.sra.org

Keywords: professional organizations, assessment, communication, management, risk analysis

United States Society of Dams
— United States Society of Dams

Source: http://ussdams.org

Keywords: professional organizations, risk analysis

Risk Analysis

Coastal Flood Exposure Mapper

Source: https://coast.noaa.gov/digitalcoast/tools/flood-exposure.html

Keywords: assessment, risk analysis

Harvard Center for Risk Analysis
— Harvard University

Source: http://www.hcra.harvard.edu

Keywords: academia, communication, risk analysis

Journal for Flood Risk Management
— Blackwell Publishing

Journal of Flood Risk Management provides an international platform for knowledge sharing in all areas related to flood risk. Its explicit aim is to disseminate ideas across the range of disciplines where flood related research is carried out and it provides content ranging from leading edge academic papers to applied content with the practitioner in mind.

Source: http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291753-318X

Keywords: professional organizations, risk analysis

National Flood Risk Management Program
— U.S. Army Corps of Engineers

This website describes the National Flood Risk Management Program: current issues, guidance, news, regional coordination, partnerships, and levee safety.

Source: https://www.iwr.usace.army.mil/Missions/Flood-Risk-Management/Flood-Risk-Management-Program/

Keywords: Corps programs, assessment, communication, management, risk analysis

National Levee Database
— U.S. Army Corps of Engineers

The National Levee Database (NLD), developed by the U.S. Army Corps of Engineers (USACE), is the focal point for comprehensive information about our nation's levees. Authorized by Congress in 2007, the database contains information to facilitate and link activities, such as flood risk communication, levee system evaluation for the National Flood Insurance Program (NFIP), levee system inspections, flood plain management, and risk assessments. The NLD continues to be a dynamic database with ongoing efforts to add levee data from federal agencies, states, and tribes.

Source: https://levees.sec.usace.army.mil/#/

Keywords: Corps programs, risk analysis

NOAA Digital Coast

This NOAA-sponsored website is focused on helping communities address coastal issues and has become one of the most-used resources in the coastal management community. The dynamic Digital Coast Partnership, whose members represent the website's primary user groups, keeps the effort focused on customer needs. There are tools and more information on flood risk management.

Source: https://coast.noaa.gov/digitalcoast/

Keywords: software, assessment, communication, management, risk analysis

OMB M-07-24: Updated Principles on Risk Analysis
— Office of Management and Budget (2007)

This Memorandum from the Office of Management and Budget reinforces the 1995 Principles for Risk Analysis with reference to more recent guidance from the scientific community, the Congress, and the Executive Branch. This Memorandum also benefits from feedback received on OMB's Proposed Risk Assessment Bulletin issued in 2006 (Proposed Risk Assessment Bulletin).

Source: https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2007/m07-24.pdf

Keywords: communication, risk analysis

OMB Memo: Principles of Risk Analysis
— Office of Management and Budget (1995)

Attached is a statement of policy on risk assessment, management and communication. The principles are designed to define risk analysis and its purposes, and to generally guide agencies as they use risk analysis in the regulatory context. They are intended to provide a general framework --a structure stating basic principles upon which a wide consensus now exists. This document was replaced by OMB M-07-24 in 2007

Source file:https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/assets/regulatory_matters_pdf/jan1995_risk_analysis_principles.pdf

Keywords: risk analysis

OMB Scientific Review of the Proposed Risk Assessment Bulletin
— Office of Management and Budget (2007)

Source: https://www.researchgate.net/publication/309044863_Scientific_review_of_the_proposed_risk_assessment_bulletin_from_the_office_of_management_and_budget

Keywords: risk analysis

Planning Manual Part II: Risk-Informed Planning
— USACE Institute for Water Resources (2017)

"Planning Manual Part II: Risk-Informed Planning" has been published as a companion to the "Planning Manual" (1996). While the 1996 manual remains the foundation document for the USACE planning process and remains a timely and valuable resource, this new manual looks to the USACE planning process for the early 21st century. It reflects the emergence of risk analysis as an effective framework for making decisions under uncertainty.

Source file: https://www.iwrlibrary.us/document/60bcacf0-cd71-4ef2-83ea-24be358d6262

Keywords: risk analysis

Principles of Risk Analysis for Water Resources
— USACE Institute for Water Resources (2017)

The purpose of this manual is to articulate for USACE and all of its stakeholders the risk analysis process used by USACE in its Civil Works program. The primary audience for this manual is the workforce of the U.S. Army Corps of Engineers. Its secondary audiences include those affected by the Civil Works program as well as those who work closely with USACE in support of their mission.

Source file: https://www.iwrlibrary.us/document/deacd6fd-67d7-4c70-e21e-9c6ccc5bc4ba (Series)

Keywords: Corps applications, assessment, communication, management, risk analysis

Risk Analysis, An International Journal
—Wiley-Blackwell (Society for Risk Analysis)

This website provide information on the International Journal, "Risk Analysis".

Source: http://www.wiley.com/WileyCDA/WileyTitle/productCd-RISA.html

Keywords: professional organizations, assessment, communication, management, risk analysis

Risk Informed Decision Framework
—Brian K. Harper (USACE Institute for Water Resources) (2012)

Source file: https://www.iwrlibrary.us/document/20fb5f01-a8bb-415b-b421-f1c9f1e29081 (Series)

Keywords: risk analysis

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United States Society of Dams
— United States Society of Dams

Source: http://ussdams.org

Keywords: professional organizations, risk analysis

Software

@Risk Software
— Palisade Corporation

This model links to Excel and is able to do Monte Carlo simulations, distributions, statistics, and other risk assessment.

Source: http://www.palisade.com/RISK/

Keywords: software, assessment

ACEIT: Automated Cost Estimating Integrated Tools
— Telecote Research, Inc.

ACEIT (Automated Cost Estimating Integrated Tools) is a family of applications that support program managers and cost/financial analysts during all phases of a program's life-cycle. ACEIT applications are the premier tool for analyzing, developing, sharing, and reporting cost estimates, providing a framework to automate key analysis tasks and simplify/standardize the estimating process. This software also has tools for Monte Carlo simulations, statistical

distributions, and more. The Army has a universal license and this can be obtained at no cost to Corps employees.

Source: (http://www.aceit.com

Keywords: software, assessment

Beach-Fx
— U.S. Army Corps of Engineers

BEACH-fx is a Corps planning, certified, shore protection, and engineering-economic software tool. The model consists of a Monte-Carlo simulation that evaluates reach erosion, physical storm impacts and damages that occur from a storm passing a shore.

Source: http://hera.cdmsmith.com/beachfx/default.aspx

Keywords: software, assessment

Carver Plus Shock Method for Food Sector Vulnerability Assessments
(2005)

Describes the Carver plus SHOCK method in how to identify and assess potential areas of risk; a case study for food.

Source: https://www.fda.gov/food/food-defense-programs/carver-shock-primer

Keywords: software, assessment

Crystal Ball
— Oracle

Spreadsheet-based application suite for predictive modeling, forecasting, simulation, and optimization. Evaluates critical factors affecting risk.

Source: https://www.oracle.com/middleware/technologies/crystalball.html

Keywords: software, assessment

EViews
— Quantitative Micro Software

EViews offers statistical, forecasting, and modeling tools through an innovative, easy-to-use object-oriented interface.

Source: http://www.eviews.com

Keywords: software, assessment

HarborSym Software
— USACE IWR Navigation Economic Technologies

HarborSym is a planning-level simulation model designed to assist in economic analyses of coastal harbors. With user provided input data, such as the port layout, vessel calls, and transit rules, the model calculates vessel interactions within the harbor. Unproductive wait times result when vessels are forced to delay sailing due to transit restrictions within the channel; HarborSym captures these delays. Using the model, analysts can calculate the cost of these delays and any changes in overall transportation costs resulting from proposed modifications to the channel's physical dimensions or sailing restrictions.

Source: https://www.iwr.usace.army.mil/Missions/Economics/Container-Model-Suite-of-Tools-CMST-/HarborSym/

Keywords: software, assessment

HEC-FDA Software (Hydrologic Engineering Center Flood Damage Analysis)
— USACE Hydrologic Engineering Center

The Flood Damage Reduction Analysis (HEC-FDA) software developed by the US Army Corps of Engineers' Hydrologic Engineering Center (HEC) provides the capability to perform an integrated hydrologic engineering and economic analysis during the formulation and evaluation of flood risk management plans. HEC-FDA is designed to assist US Army Corps of Engineers (USACE) study members in using risk analysis procedures for formulating and evaluating flood risk management measures (EM 1110-2-1619, ER 1105-2-101). Also, will assist USACE staff in analyzing the economics of flood risk management projects.

Source: https://www.hec.usace.army.mil/software/hec-fda/

Keywords: software, assessment

Hydrologic Engineering Center, U.S. Army Corps of Engineers
— USACE Hydrologic Engineering Center

The Hydrologic Engineering Center (HEC), an organization within the Institute for Water Resources, is the designated Center of Expertise for the US Army Corps of Engineers in the technical areas of surface and groundwater hydrology, river hydraulics and sediment transport, hydrologic statistics and risk analysis, reservoir system analysis, planning analysis, real-time water control management and a number of other closely associated technical subjects. This website has the latest software releases from HEC and many consider risk.

Source: http://www.hec.usace.army.mil/

Keywords: Corps applications, software

IWR Planning Suite
— USACE Institute for Water Resources

IWR Planning Suite is a Corps of Engineers planning model that has multiple functions. This model has modules for generating plans, doing cost-effectiveness and incremental cost analysis, annualizing costs and benefits, multi-criteria decision analysis, and a risk module is in the works.

Source: http://crbweb01.cdm.com/IWRPlan/default.htm

Keywords: software, assessment

National Inventory of Dams
— U.S. Army Corps of Engineers

National Inventory of Dams

Source: https://nid.sec.usace.army.mil/

Keywords: Corps programs, software

NOAA Digital Coast

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Source: https://coast.noaa.gov/digitalcoast/

Keywords: software, assessment, communication, management, risk analysis

NOAA Sea Level Rise Viewer

This tool show visual depictions of flood risk within communities.

Source: https://coast.noaa.gov/digitalcoast/tools/slr.html

Keywords: software, assessment, communication

R Project for Statistical Computing
— R Project

R is a free software environment for statistical computing and graphics. It compiles and runs on a wide variety of UNIX platforms, Windows and MacOS. To download R, please choose your preferred CRAN mirror.

Source: http://www.r-project.org

Keywords: software, assessment

SAS
— SAS

This company produces SAS statistical software that is commonly used by economists. They also produce other software for risk management, and more.

Source: http://www.sas.com

Keywords: software, assessment

SPSS Software
— IBM

Statistical software

Source: http://www-01.ibm.com/software/analytics/spss/

Keywords: software, assessment

Stata
— StataCorps LLC

Statistical software that can assist in risk assessment.

Source: http://www.stata.com

Keywords: software, assessment

Other Topics

Climate Change and Federal Water Resources Project Planning and Decision Making
—David A. Moser, PhD (USACE Institute for Water Resources)

This white paper addresses the consideration of climate change on U.S. Federal water resources planning and project evaluation.

Source file: https://www.iwrlibrary.us/document/6bac1340-99bb-4769-dc6d-7a581c563380 (Series)

Department of Homeland Security, Dams Sector: Critical Infrastructure and Key Resources — *Department of Homeland Security*

The Dams Sector comprises the assets, systems, networks, and functions related to dam projects, navigation locks, levees, hurricane barriers, mine tailings impoundments, or other similar water retention and/or control facilities. The Dams Sector is a vital and beneficial part of

the nation's infrastructure and continuously provides a wide range of economic, environmental, and social benefits, including hydroelectric power, river navigation, water supply, wildlife habitat, waste management, flood control, and recreation.

Source: http://www.dhs.gov/dams-sector

Risk, From a Broader Perspective
—Nicholas Bakalar (New York Times) (2008)

Statistics on life/death injuries based on risky behaviors.

Source: http://www.nytimes.com/2008/07/08/health/research/08stat.html?_r=1&fta=y