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Flood Risk Management: Exploring "Best Practices"

U.S. Army Corps of Engineers' Experience and Perspectives

Steven Stockton
Director of Civil Works, U.S. Army Corps of Engineers

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The Corps of Engineers has a history of addressing risk

- 1990's concern over deterministic planning
- 1996 Corps of Engineers' circular on risk-based planning
- 1996-2005 Corps of Engineers' focus on addressing risk in hydrology

Hurricane Katrina (2006) galvanized a national re-examination

- Place paramount importance on public safety
- Require closer cooperation, among federal agencies (especially the Federal Emergency Management Agency) and among various levels of government
- Shift focus from flood damage reduction ("the government will protect us") to flood risk reduction ("we are all responsible for our safety")
- Broaden scope of risks to be considered (e.g., social, environmental, cultural)

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Corps of Engineers' Risk-Oriented Activities

- National Flood Risk Management Program
- Inter-agency Performance Evaluation Taskforce (IPET)
- National Committee on Levee Safety
- Louisiana Coastal Protection and Restoration (LaCPR)
- Buying-down risk in California
- Other

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http://www.iwr.usace.army.mil/nfrmp/

NATIONAL FLOOD RISK MANAGEMENT PROGRAM

Vision: To lead collaborative, comprehensive and sustainable national flood risk management to improve public safety and reduce flood damages to our country.

Mission: To integrate and synchronize the ongoing, diverse flood risk management projects, programs and authorities of the US Army Corps of Engineers with counterpart projects, programs and authorities of FEMA, other Federal agencies, state organizations and regional and local agencies.

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https://ipet.wes.army.mil/

Inter-agency Performance Evaluation Taskforce (IPET)

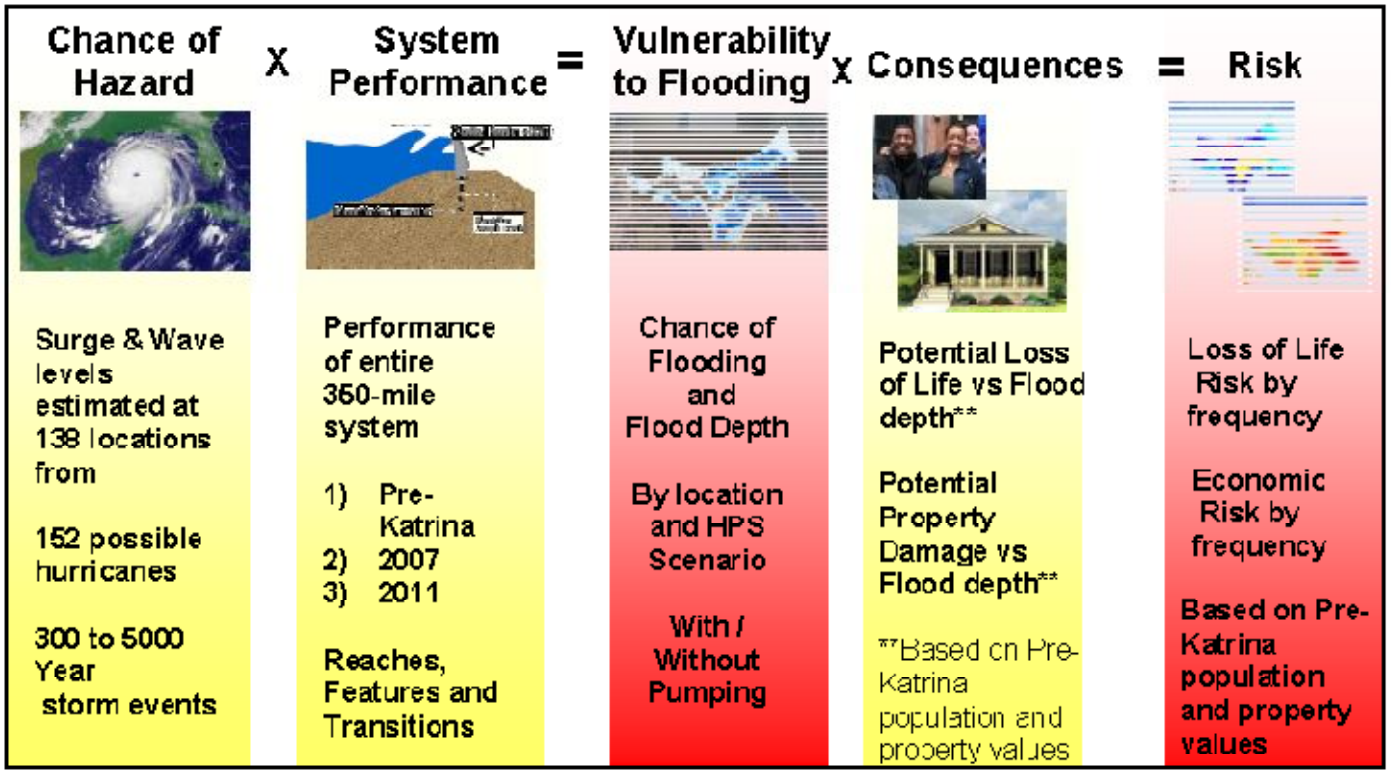

Figure 32. Risk assessment framework used in IPET analysis of New Orleans. While risk was assessed for a projected 100-year HPS design scheduled for 2011, this document only discusses the risk for the Pre-Katrina and 2007 HPS conditions.

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http://www.iwr.usace.army.mil/ncls/index.cfm

National Committee on Levee Safety

- Authorized in 2007 to "develop recommendations for a national levee safety program, including a strategic plan for implementation of the program."
- Inter-agency (Corps, Federal Emergency Management Agency, state, regional and local agencies, private sector)
- January 2009 report to Congress recommended:
  - Leadership via National Levee Safety Commission
  - Building strong state levee safety programs
  - Foundation of well-aligned federal agency programs/processes

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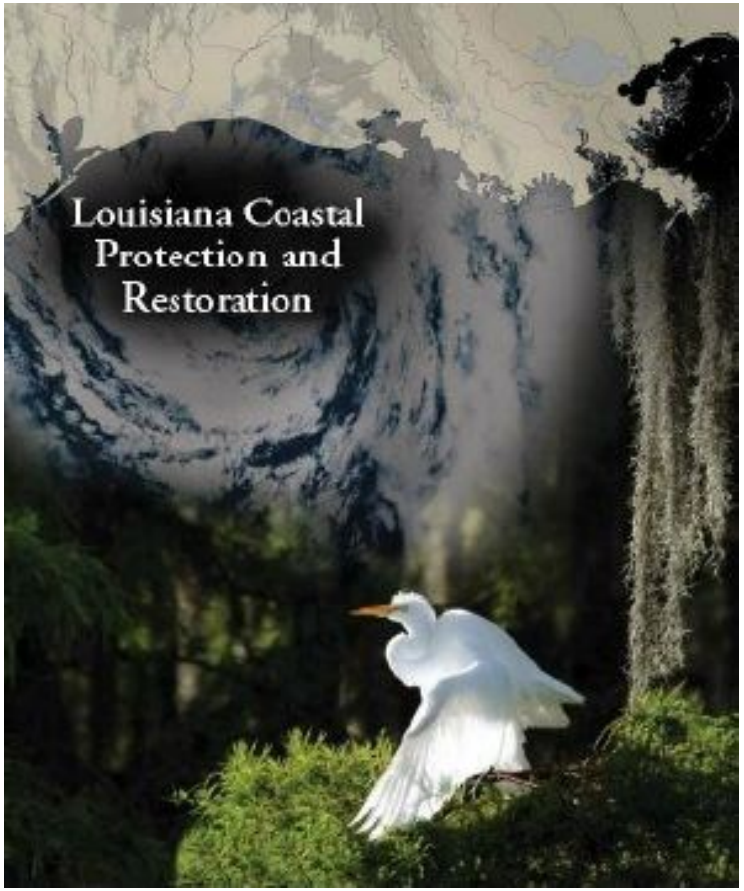
http://lacpr.usace.army.mil/

Louisiana Coastal Protection and Restoration (LaCPR)

- Analysis and design project involving development of a full range of hurricane protection measures, equivalent to Category 5 storm intensity, spanning comprehensively across all of coastal Louisiana, and integrating water resources objectives of hurricane protection, flood control, and coastal restoration
- Key assumption: coastal restoration is fundamental to comprehensive protection and is included as a component of every plan



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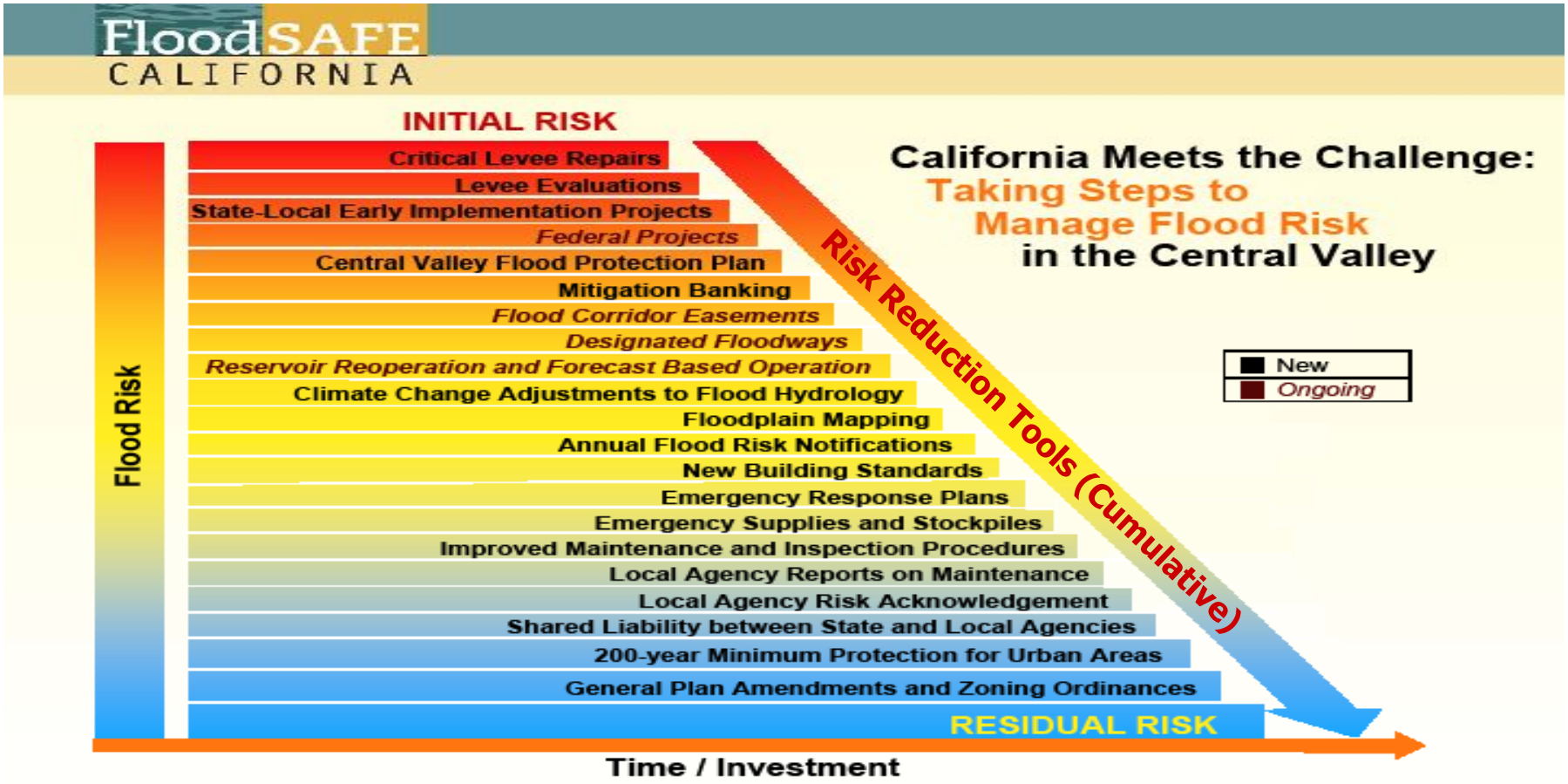
http://www.water.ca.gov/floodsafe/

FloodSafe California: Buying Down Risk



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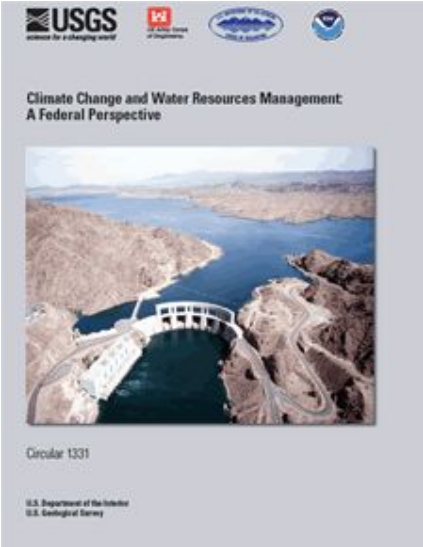
Other Activities



Interagency Report on Climate Change and Water Resources Management

Developing an improved framework and methods to encourage public involvement in flood risk management

Refined analytical frameworks for coastal hazards and risk reduction

Dam Safety Program, including Risk Policy and Procedures Team

Watershed screening tools to provide defensible framework to support budget prioritization

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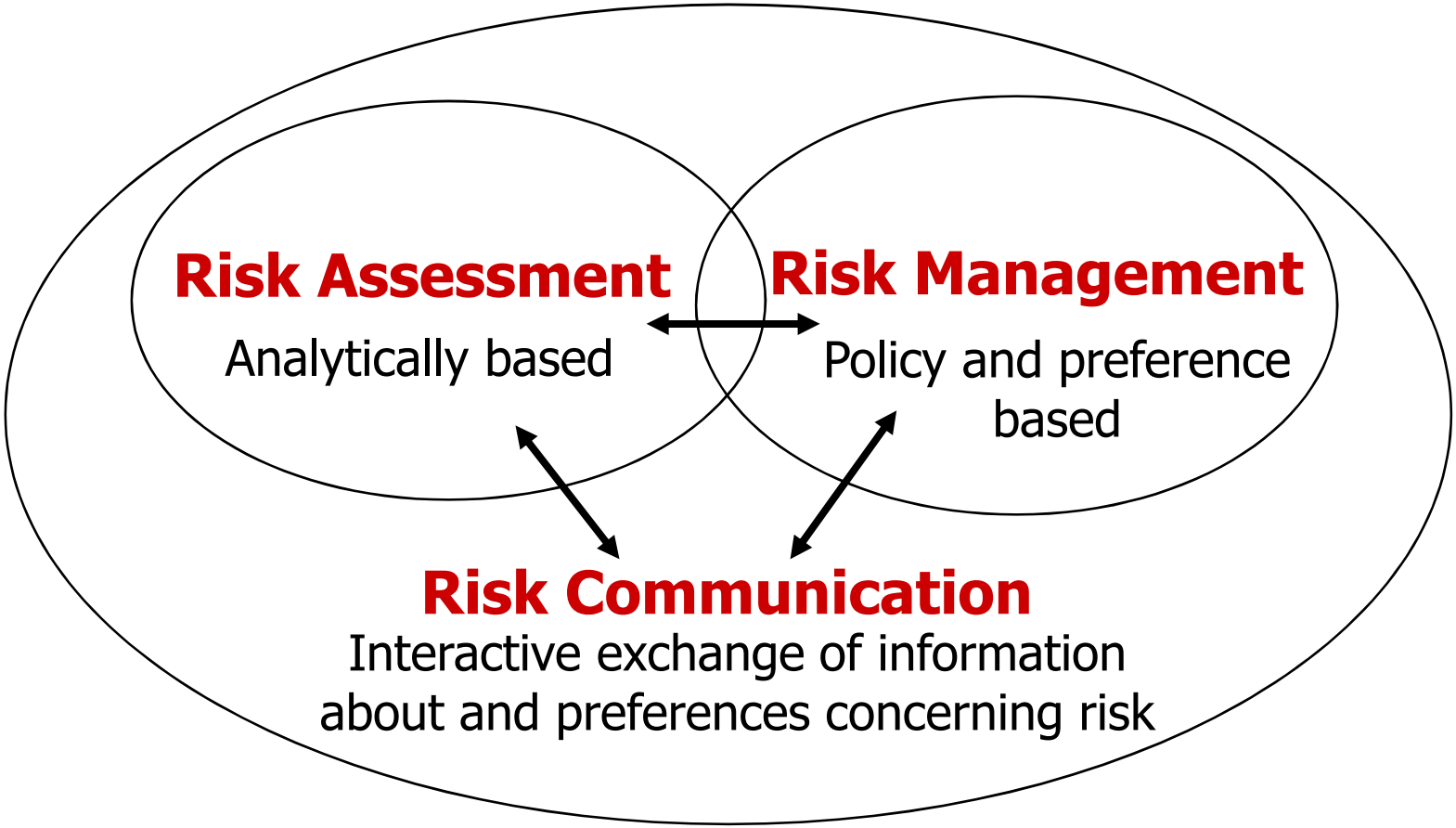
The Risk Family



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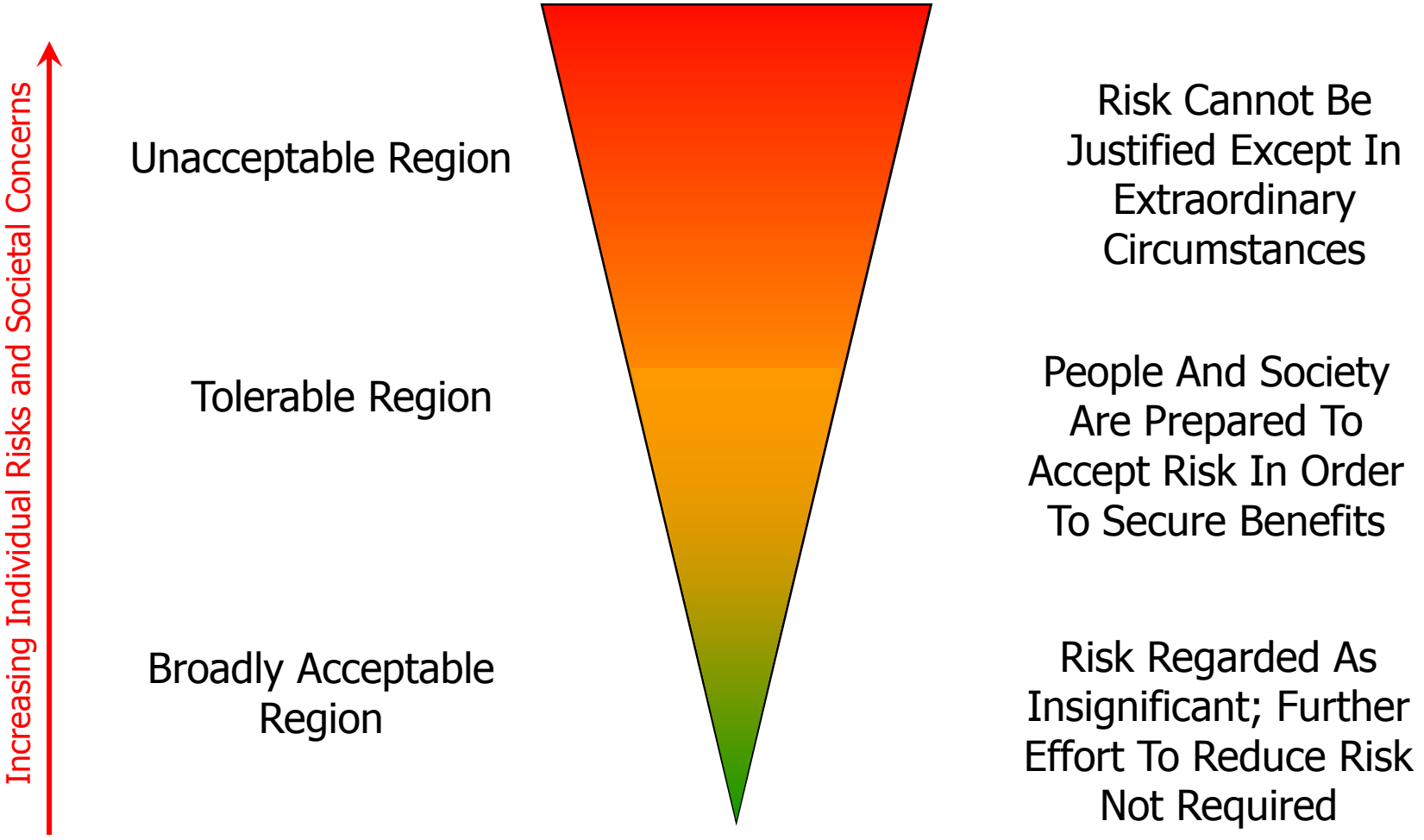
Tolerable Risk



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Challenges / Potential Areas for Collaboration

- Cost-effective inventory and assessment
- Developing a common view (within the Corps, among agencies, with partners)
- Defining tolerable risk and moving from concept to implementation
- Developing effective risk communication
- Developing effective geotechnical risk assessment, especially for levees

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An Invitation…

- International policy-oriented discussions on collaborative frameworks for achieving common objectives in flood risk management
- Move from theory to practice
- 2010 in the United States (likely Autumn)
- Objectives:
  - Draw on, and learn from, various international experiences
  - Examine integration of technical, policy, strategy (e.g., regional risk assessments) into action
  - Discuss practical approaches for collaboration: how do we get there together?
  - Document insights, lessons from discussions