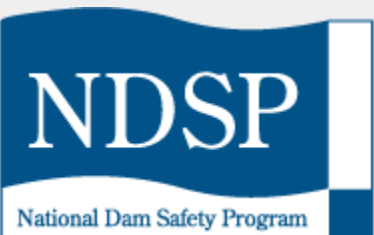




# Art of Effective Dam Risk Communication

National Dam Safety Program (NDSP)

March 2017



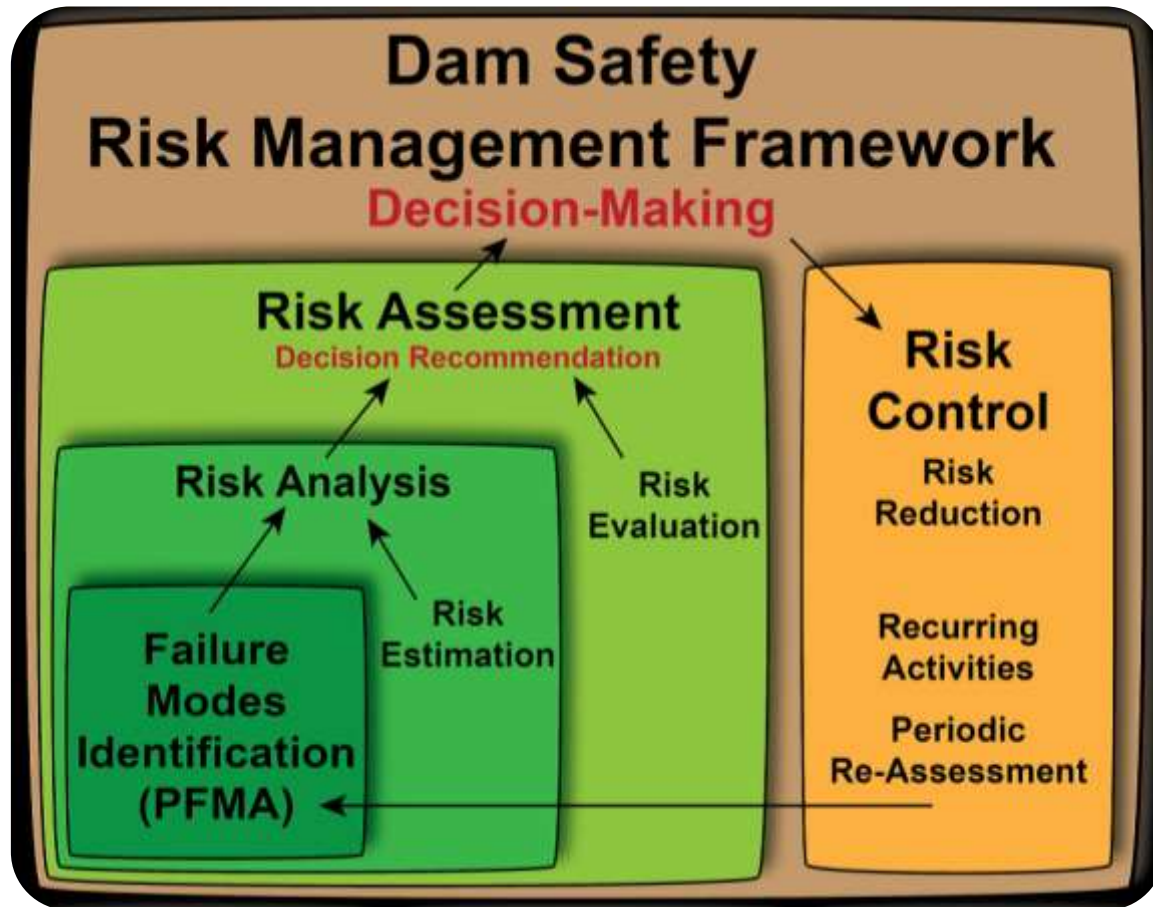
# Importance of Sharing Dam Risk Information

- Helps communities understand their risk
- Can inform dam risk reduction actions
- Useful for emergency operations and response planning

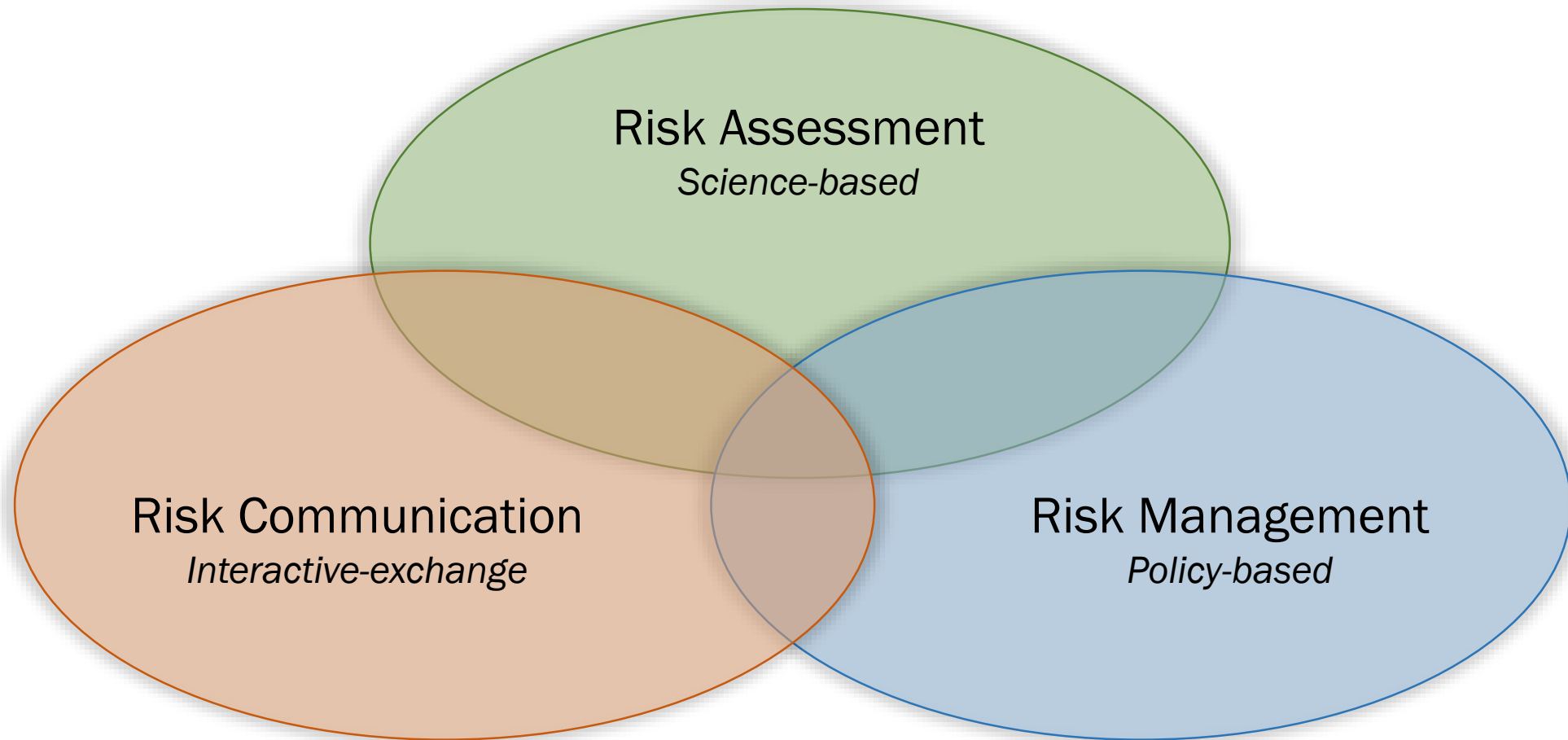
# What is Risk?

- Likelihood of a structure being loaded
- Adverse structural performance
- Magnitude of resulting consequences

# Risk Management Framework



# Risk Analysis Framework



# Risk Communication

- Interactive exchange of information
- Help affected communities understand risk assessment and risk management process
- Two-way conversation

# Risk Communication

- Early and often
- Trusted and credible source
- Written
- Verbal
- Visual
- Context
- Desired outcome

# Benefits of Risk Communication

- Fosters better understanding of risk for potentially affected parties
- Helps prevent ineffective, fear-driven and potentially damaging responses to risk information/risk situations
- Opens opportunities for potentially affected organizations and individuals to share risk management responsibility and enhance risk management



# Risk Perception

- Consider different perceptions of risk when communicating risk
- Risk perception is influenced by objective and subjective factors
- Good risk communication addresses both the objective and subjective aspects of risk perception

# Risk Communication Strategy: 7 Steps

1. Identify a risk related issue or scenario
2. Identify key stakeholders (audiences)
3. Identify stakeholder questions and concerns
4. Develop messages consistent with risk communication principles
5. Develop supporting information
6. Conduct testing
7. Plan for delivery

# Sharing Dam Risk Information

- Joint effort between FEMA NDSP and DHS Office of Infrastructure Protection
- Two phases:
  - 1: Paper evaluating dis/advantages of sharing dam risk information
  - 2: Recommendations on what info should be shared or withheld

# Sharing Dam Risk Information: Phase 1

- DHS Dams Sector released a paper:
  - *Benefits and Disadvantages of Sharing Dam Safety and Security Information*
- Presents benefits and disadvantages of sharing certain dam risk info among various stakeholders who manage & communicate risk

# Sharing Dam Risk Information: Phase 2

- No consensus on sharing dam inundation info with population at risk
  - Details published in *Dams Sector Government Coordinating/Sector Coordinating Councils (GCC-SCC) Information Sharing Workgroup White Paper*
- NDSRB recommended a joint task force to research & develop guidance
  - Army Corps of Engineers
  - Association of State Dam Safety Officials
  - Bureau of Indian Affairs
  - Bureau of Reclamation
  - Department of Homeland Security
  - FEMA National Dam Safety Program
  - Federal Energy Regulatory Commission
  - NC Department of Environmental Quality
  - NJ Department of Environmental Protection
  - NYC Environmental Protection Bureau of Water Supply – Emergency Planning
  - Pacific Gas & Electric Company
  - SC Department of Natural Resources
  - Town of Chittenden, Vermont
  - Vermont Division of Emergency Management & Homeland Security

# Information Sharing Task Group

- Purpose is to guide development of products for stakeholders responsible for communicating risk
- Focus on five mission areas: prevention, protection, mitigation, response, recovery
- The Task Group will:
  - Identify existing methods on effective risk communication related to dams.
  - Develop a guideline outlining how dam owners/operators can effectively communicate dam risk information to emergency services/support organizations while protecting sensitive information.
  - Develop tools and resources for emergency services/support organizations on the most effective use of the information while protecting sensitive information.
  - Develop an outreach strategy for FEMA to communicate and distribute the products developed by the Task Group.

# Task Group Topics

- What parties are involved in dam risk communication?
- When does risk communication happen?
  - Before, during, and after an emergency
  - Mitigation, Protection, Prevention, Response and Recovery
- What information does the dam owner/operator have regarding the risk?
- What/how/when what dam information does the EMA need to manage the risk?
- What/when do the emergency support services want to know?
- What/how/when would emergency support use with this info?



# FEMA



FEMA

