Dam safety: Risks

- Natural hazards (floods, earthquakes, etc.)
- Technical or human failure
- Sabotage and terrorism
Tools for Risk Management

Hydraulic safety: Early warning systems (1980ies)

Structural safety: Dam safety regulations, including operation guidelines, periodic safety inspections and emergency action plans (1990ies)

Dam Security:

Comprehensive Risk Analysis – Present Challenge
Increasing interdependence of critical infrastructures

• Government & Authorities
• Research facilities
• Cultural assets
• Broadcast & TV
• Health care
• Rescue and emergency service
• Water supply
• Transport & logistics
• Food supply
• Information Technology (IT)
• Energy
• Finance & insurance
• Dangerous goods
 Increasing awareness

German Ministry of the Interior:

“Protection of Critical Infrastructures – Risk and Crisis Management”

(Guideline for business companies and public administrations)

January 2008
Conclusions

Do we need a methodology to perform a comprehensive risk analysis?

YES!

What should the dam engineer do?

• HELP TO REACH SYNERGIES WITH EXISTING SAFETY MANAGEMENT

• BE OPEN TO COOPERATE WITH PROFESSIONALS FROM OTHER DISCIPLINES

• APPLY RISK ANALYSIS METHODOLOGY TO GET A BETTER UNDERSTANDING OF THE OVERALL DAM SAFETY