

iPresas is a technology-based spin-off company of the Universitat Politècnica de València (UPV) with expertise centered on **flood risk management** and integrated safety management of **dams and other critical infrastructures**. The technical support provided by iPresas is based on its development of methodologies and tools for the application of **risk analysis techniques to critical infrastructure management and natural hazards**, as well as **software development**.

iPresas' team, with **25 years** of experience in **dam safety**, has developed an innovative methodology for calculating and modelling risks in dam-reservoir systems and **flood risks**. Use of this methodology offers great added value for **decision making** in risk reduction measures. In addition to this innovative tool, a main asset of iPresas is its **extensive know-how** in the field of dam safety and natural hazards risk analysis. This know-how has been acquired, used and extended through several research projects and professional applications all around the world.

## MAIN PROJECTS

- Risk-informed Dam Safety Governance, Climate Change adaptation and investment prioritisation in dam safety of Spanish state dams, DGA (Spain)  
 Dirección General del Agua (DGA)
- Guidelines for Dam Monitoring of Corani dam (Bolivia)  
 ENDE Corani
- Hydrological and hydraulic assessment of the spillway of Riogrande II and Santa Rita dams (Colombia)  
 Empresas Públicas de Medellín (EPM)
- Dam Safety Review of Calima dam (Colombia)  
 Celsia
- Dam Safety Review of La Fe dam and update of flood maps (Colombia)  
 Empresas Públicas de Medellín (EPM)
- Qualitative Disaster and Climate Change Risk Analysis for roads (Peru)  
 Inter-American Development Bank (IDB)
- Risk-informed Dam Safety Program (Malaysia)  
 Tenaga Nasional Berhad (TNB) in a contract to Universiti Tenaga Nasional (UNITEN)
- Update of the Operation Rules of Salvajina dam (Colombia)  
 Celsia
- Defining Flood Control and Mitigation Works in the Sula Valley (Honduras)  
 Inter-American Development Bank (IDB)
- Numerical Modelling of Béznar and Rules dams (Spain)  
 Agencia Andaluza del Agua (in a contract to SANDO y HCC)
- Qualitative Disaster and Climate Change Risk Analysis of a bridge (Argentina)  
 Inter-American Development Bank (IDB)
- Independent External Expert for reviewing US Army Corps of Engineers Dam Safety Program  
 US Army Corps of Engineers (USACE)
- Study to enhance the resilience of the energy system in The Bahamas after Hurrican Dorian  
 Inter-American Development Bank (IDB)
- Numerical modelling of six dams of the Insular Water Council of Gran Canaria  
 Insular Water Council of Gran Canaria (Spain)
- Review and definition of flood control works at Ulua and Chamelecón rivers (Honduras) after Hurrican IOTA  
 Inter-American Development Bank (IDB)



- Comprehensive safety review and Risk Analysis of dams of Salvajina, Alto Anchicayá and Prado (Colombia)  
Celsia Colombia
- Technical report on recommendations to integrate Disaster Risk Management and Climate Change Adaptation into the Public Investment  
Inter-American Development Bank (IDB)
- Intermediate safety review of dams of Quebradona and El Buey (Colombia)  
EPM (Medellin Public Company)
- Risk analysis of Rio Hondo, Escaba and Batiruana Dams (Argentina)  
Dam Safety Regulatory Agency of Argentina (ORSEP)
- Review and update of the designs for flood control at Walter Thilo Deininger park (El Salvador)  
Inter-American Development Bank (IDB)
- Technical inspection and development of risk-based screening tool for dams in Bolivia  
Inter-American Development Bank (IDB)
- 2020
- Panel of experts for the review of the works of hydroelectric project of Condor Cliff (Argentina)  
China Gezhouba Group Company Limited - Electroingenieria S.A. – Hidrocuyo S.A.
- Intermediate safety review of dams of Porce II, Porce III, Santa Rita and Playas (Colombia)  
EPM (Medellin Public Company)
- Analysis of risk reduction measures for Valencian ports against climate change  
AVI (Valencian Agency for Innovation) in collaboration with UPV
- Support to develop a dam safety program for EPSAS (Bolivia)  
EPSAS (urban water supply company for La Paz)
- Technical support to implement risk analysis in Salto Grande dam (Uruguay – Argentina)  
Inter-American Development Bank (IDB) in collaboration with ORSEP and CHSG
- 2019
- Dam break analysis and monitoring system review for Mtkvari HPP (Georgia)  
Mtkvari HPP
- Comprehensive safety review of hydropower dams of ISAGEN (Colombia)  
ISAGEN
- Risk-informed quality control of flood protection measures under the programme "Argentina: resilient to natural risks"  
Inter-American Development Bank (IDB)
- Development on Guidelines for Assessing and Managing Risks Associated with Dams  
EGIS EAU (under a contract for CWC, Ministry of Water Resources of India)
- 2018
- Failure mode identification and risk analysis of road RN5 (Haiti) considering climate change  
Inter-American Development Bank (IDB)
- Consultancy for the review and strengthening of the methodology of disaster risk analysis and climate change in IDB projects  
Inter-American Development Bank (IDB)
- Technical assistance for numerical modelling of Chira and Soria dams  
Insular Water Council of Gran Canaria (Spain)
- Risk-informed dam safety management of Pretura del Molino, Carrascalejo and las Majadillas dams  
Regional Government of Extremadura (Spain)
- Project DAMSAFE: Enhancing Dam Safety and Water Management in Karnataka (India)  
Funding by Netherlands Enterprise Agency (project led by Deltares)
- Support to dam safety and risk management in Brasil. Development of a tool to prioritize risk reduction actions in 163 dams. Dam technical inspection of 31 dams  
Gas Natural Fenosa (under a contract for the Brazilian Ministry of National Integration)
- Technical assistance to introduce risk analysis techniques as a tool to support dam safety management in Argentina. Risk Analysis of Cerros Colorados dams system  
Dam Safety Regulatory Agency of Argentina (ORSEP)
- 2017
- Risk analysis of San Marcos dam  
Regional Government of Extremadura (Spain)



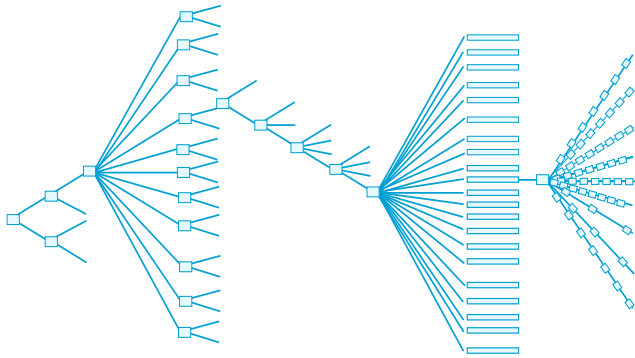
- 2016
  - Independent External Expert for reviewing US Army Corps of Engineers Dam safety Program  
US Army Corps of Engineers
  - Quality control from a risk analysis perspective of the flood risk control measures at the Choluteca river in Tegucigalpa (Honduras)  
Inter-American Development Bank (IDB)
  - Pilot project to define procedures for quantitative estimation of spillway gate functionality and evaluate its impact on dam safety risk management  
Gas Natural Fenosa (Spain)
  - Risk analysis of Jaime Ozores dam  
Regional Government of Extremadura (Spain)
  - Risk analysis consultancy services for the portfolio of dams owned by Grupo Gas Natural Fenosa  
Gas Natural Fenosa (Spain)
- 2015
  - Risk analysis study for supporting safety management in "El Vado" dam  
Canal de Isabel II (Spain)
  - Risk analysis of Membrío dam  
Regional Government of Extremadura (Spain)
- 2014
  - Risk analysis for Fierze, Komani and Vau I Dejes dams (Albania), including quantitative risk modelling and prioritization of risk reduction actions  
Gas Natural Fenosa (under a contract for KESH, Albanian Power Corporation)
- 2013
  - Risk analysis of "El Horcajo" dam  
Regional Government of Extremadura (Spain)
  - Comprehensive and quantitative risk analysis for Hällby dam: A case study in Sweden  
ELFORSK (Sweden)
  - Numerical modelling of La Aceña dam behaviour  
Canal de Isabel II (Spain)
- 2012
  - Protection plan for a water treatment plant in Spain  
Aguas de Valencia (Spain)
- 2011
  - Risk analysis of a portfolio of 27 dams owned by the Duero River Authority in Spain, including evaluation and prioritization of investments for risk reduction  
Ofiteco (under a contract for the Duero River Authority in Spain)



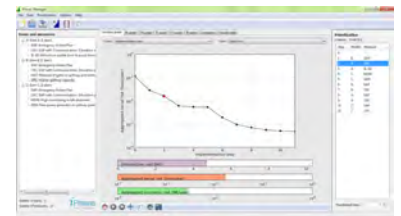
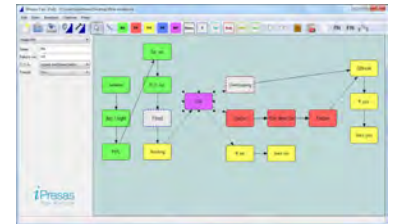
## SOFTWARE

iPresas develops software for **risk informed management of critical infrastructure portfolios**. iPresas software includes detailed documentation and examples (in English and Spanish). Specifically, two main software tools has been developed:

- **iPresas Calc** For risk calculation using event trees and influence diagrams.
- **iPresas Manager**: For risk informed management of a portfolio of critical infrastructures based on outcomes from quantitative risk models.



Free demo software can be found at:  
[www.ipresas.com](http://www.ipresas.com)



## TRAINING

iPresas provides training services on risk analysis and safety management through practical examples, real cases and examples using software iPresas. iPresas has conducted several education and training courses related with **Risk Analysis applied to Dam Safety Management** and organized by the Spanish National Committee on Large Dams (**SPANCOLD**), with more than 100 participants from different countries. iPresas team has also organized courses for public and private entites like the Inter-American Development Bank (IABD) and in countries like **Argentina and Colombia**.

## ISO CERTIFICATES

- **ISO 9001**: Quality Management System.
- **ISO 14001**: Environmental Management System.

