Water Management and Risk Quantification

OSL Analytics Academy | IIPER

Understand your company's path to long-term success with Quantitative Risk Management and Decision Analytics

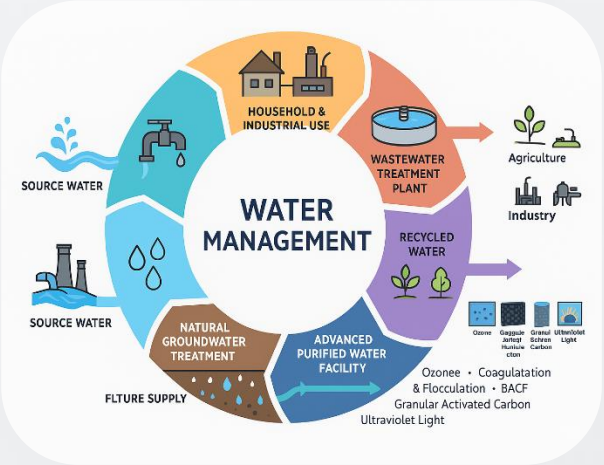
OVERVIEW

- **Are you ready to challenge your Water Management Strategy?**
- **How to manage risk on projects, budgets, and investments?**
- **What is the role of risk quantification to unlock value creation?**

Environmental, Social, and Governance (ESG) factors—along with Sustainable Development Goals (SDGs)—have become global imperatives for water management companies. Both public and private sector entities now face intensified scrutiny from regulators, investors, employees, and socially conscious stakeholders, who demand greater accountability and transparency in the management of water resources.

In the context of water infrastructure and utility operations, Risk Management is central to the governance relationship between shareholders, managers, and stakeholders. Board members must now act not only as fiduciaries but also as stewards of long-term sustainability and resilience. Their decisions must reflect an integrated approach to managing water-related risks—ranging from environmental impacts (e.g., groundwater depletion, pollution, climate change) to social equity (e.g., access, affordability), and governance structures (e.g., compliance, corruption prevention, data transparency).

This professional executive training, "**Water Management and Risk Quantification**," aims to understand the critical concepts of water management and its related risks and opportunities, using quantitative methods and decision analytics to support professionals interested in analysing and governing ESG issues beyond a compliance or report approach.



Data-Driven Water Management

A Risk Quantification Approach

Executive Training

Water Management and Risk Quantification

★★★★★ - "Leverage business opportunities and manage risk in Water Management companies focusing on long-term success and reputation by applying quantitative methods beyond pure Monte Carlo Simulations."

Neil Harvey
CEng, CQRM, Senior Process Engineering

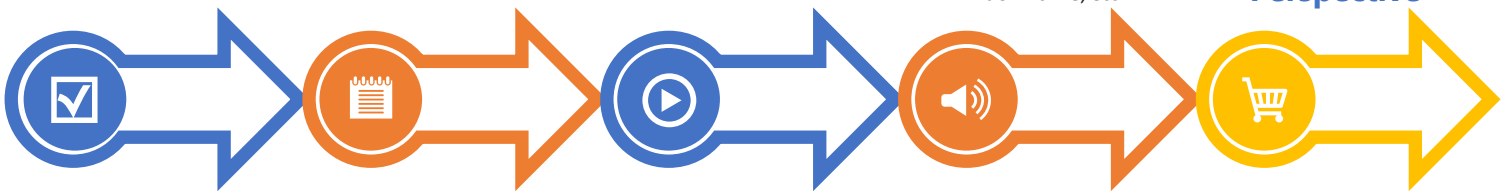
CORE TOPICS

- Business Model
- Regulation and Compliance
- Operational Risk
- Investing Risk
- ESG Strategies
- Project Risk Management
- Enterprise Risk Management

Risk-Based Analytical Tools

Driving long-term sustainable businesses

PROGRAM JOURNEY



Risk as a Business Perspective

Value Creation

Use Financial Statements (P&L, BS, Cash Flows) to understand the business model.

Day 1: Literacy & Leadership

Optimization Analytics

Risk data influences how institutional investors, hedge funds, and pension funds allocate their resources.

Investment – Portfolio Management

Strategic Plan – Firm Level

Risk Quantification

Model risk, run Monte Carlo simulations, and select the water management areas that enhance value by managing risk

Day 2: Regulation & Compliance

Project Investment and Execution

Selected WM projects or strategies require a risk-based project management approach, managing time and cost, and potential disruption on business, production, downtime, etc.

Project Management (Strategy Execution)

Day 3-4: Investment and Portfolio

Enterprise Risk Management Perspective

Water Management and ERM

There are other enterprise risks that need to be quantified, which are beyond the scope of Water Management.

Day 4-5 &: WM Projects and Strategic Risk

Business Inquiries and Strategies

Make better investment decisions

COURSE OBJECTIVES

Explain…

- Explain what Risk is and its relevance to making financial decisions
- Describe the relationship between Risk and Strategic Decision Making
- Explain agency problems in Risk Management

Business

Quantify…

- Determine the drivers of firm performance
- Implement decision analytics and quantitative methods to manage Water Management-related risks
- Assess business performance using publicly available information

Risk Models

Analyse…

- Provide decision support on the role of Water Management in investment strategies
- Prioritize Water Management investment strategies
- Translate compliance and regulation into business intelligence

Impacts

Implement…

- Implement value creation strategies while minimising risk
- Manage project risk on costs and schedule in water management projects
- Enhance your quantitative enterprise risk management (ERM) approach

Actions

Meet Our Training Team

PROGRAM DIRECTORS

Dr Elvis Hernandez

PhD(Fin), PhD(EngSc), MIF, MSc, CQRM, AFHEA

Executive Director of OSL Risk Management and Academic Director of OSL Analytics Academy. Risk Management and ESG specialist

Prof Dr Johnathan Mun

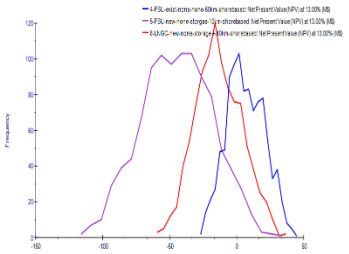
Ph.D., MS, MBA, BS, CQRM, FRM, CFC, MIFC

CEO of Real Options Valuation and Chairman of the International Institute of Professional Education and Research (IIPER). Software Creator and Author

IIPER Accredited Trainers

Risk-Based Applications

Learning By Doing



Business Risk Profiles

Climate Change	Natural Capital	Pollution & Waste	Env. Opportunities
Carbon Emissions	Water Stress	Toxic Emissions & Waste	Clean Tech
Product Carbon Footprint	Biodiversity & Land Use	Packaging Material & Waste	Green Building
Financing Environmental Impact	Raw Material Sourcing	Electronic Waste	Renewable Energy
Climate Change Vulnerability			

Human Capital	Product Liability	Stakeholder Opposition	Social Opportunities
Labor Management	Product Safety & Quality	Controversial Sourcing	Access to Communication
Health & Safety	Chemical Safety	Community Relations	Access to Finance
Human Capital Development	Consumer Financial Protection		Access to Health Care
Supply Chain Labor Standards	Privacy & Data Security		Opportunities in Nutrition & Health
	Responsible Investment		

Corporate Governance	Corporate Behavior
Board	Business Ethics
Pay	Tax Transparency
Ownership	
Accounting	

ESG
3 Criteria
1200+ Indicators

ENVIRONMENT

6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND

SOCIAL

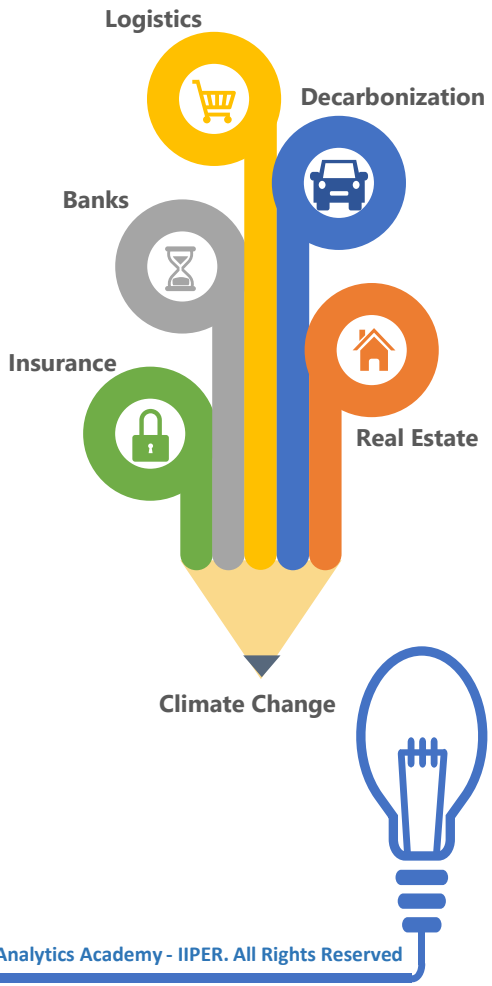
1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
16 PEACE, JUSTICE AND STRONG INSTITUTIONS

GOVERNANCE

5 GENDER EQUALITY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS

SDGs
17 Goals
169 Items

CASE STUDIES



Support Material

LEARNING TOOLKIT

- **eBook and Excel Models**

  Containing the slides to be seen during the executive program, therefore, it is focused on learning the specific ideas and methodologies around ESG and Risk Quantification

- **Risk Quantification Tool**

  Risk Simulator* is an Excel Add-in Software for Applying Monte Carlo Risk Simulation and Decision Analytics in your existing Excel spreadsheet models for ESG assessments.

  Risk Simulator

- **Integrated Risk Management Tool**

  DecRisk | Integrated Projects* is an advanced risk management software to perform Integrated Risk Management in ESG strategies, including capital investments, project execution and enterprise risk management, among other areas.

*1-year access to all the software and analytical tools included

OAA – IIPER

Water Management and Risk Quantification

OSL Analytics Academy (OAA) and the International Institute of Professional Education and Research (IIPER) have joined forces to equip leaders for conducting ESG assessments, risk quantification and sustainable business analysis.

We look forward to working with professionals interested in integrating risk quantification into sustainability considerations, decision-making, business strategies, and corporate governance.

By joining forces, we have the expertise to provide organisations with the tools and skills to accelerate progress toward a more sustainable business to overcome climate change, inequality, and economic crisis.

"★★★★★ ESG Fundamentals and Risk Quantification offers quick models and tools to start analysing ESG from a risk management perspective!"
Shane Grimes, MBA
Senior ESG Consultant

"★★★★★ This course is very relevant to enhance any job role in sustainability and ESG. Great predefined examples to manage long-term sustainability plans."
Dr Luis Enrique Pedauga
Senior Consultant – European Commission

CONTACT US

For all enquiries please contact the OSL Analytics training team at support@oslriskmanagement.com

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