

MANAGEMENTUL RISCULUI IN APE TULBURI RISCURI SI OPORTUNITATI

20 FEBRUARIE 2014

A graphic of a water splash with ripples, used as a background for the speaker information.

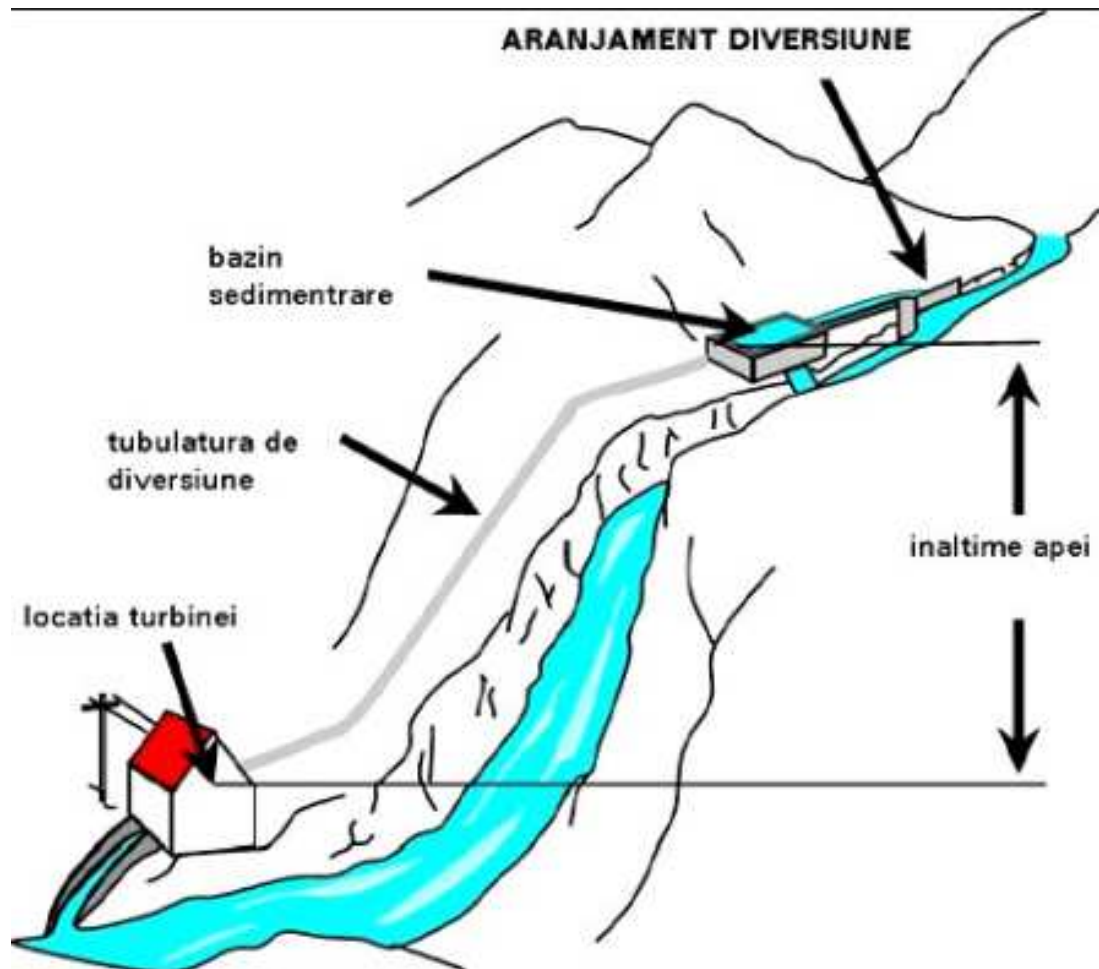
Radu Mustata

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HIDROCENTRALA este..

- O [centrala electrica](#) folosită pentru a transforma [energia mecanica](#) produsă de apa în [energie electrica](#)



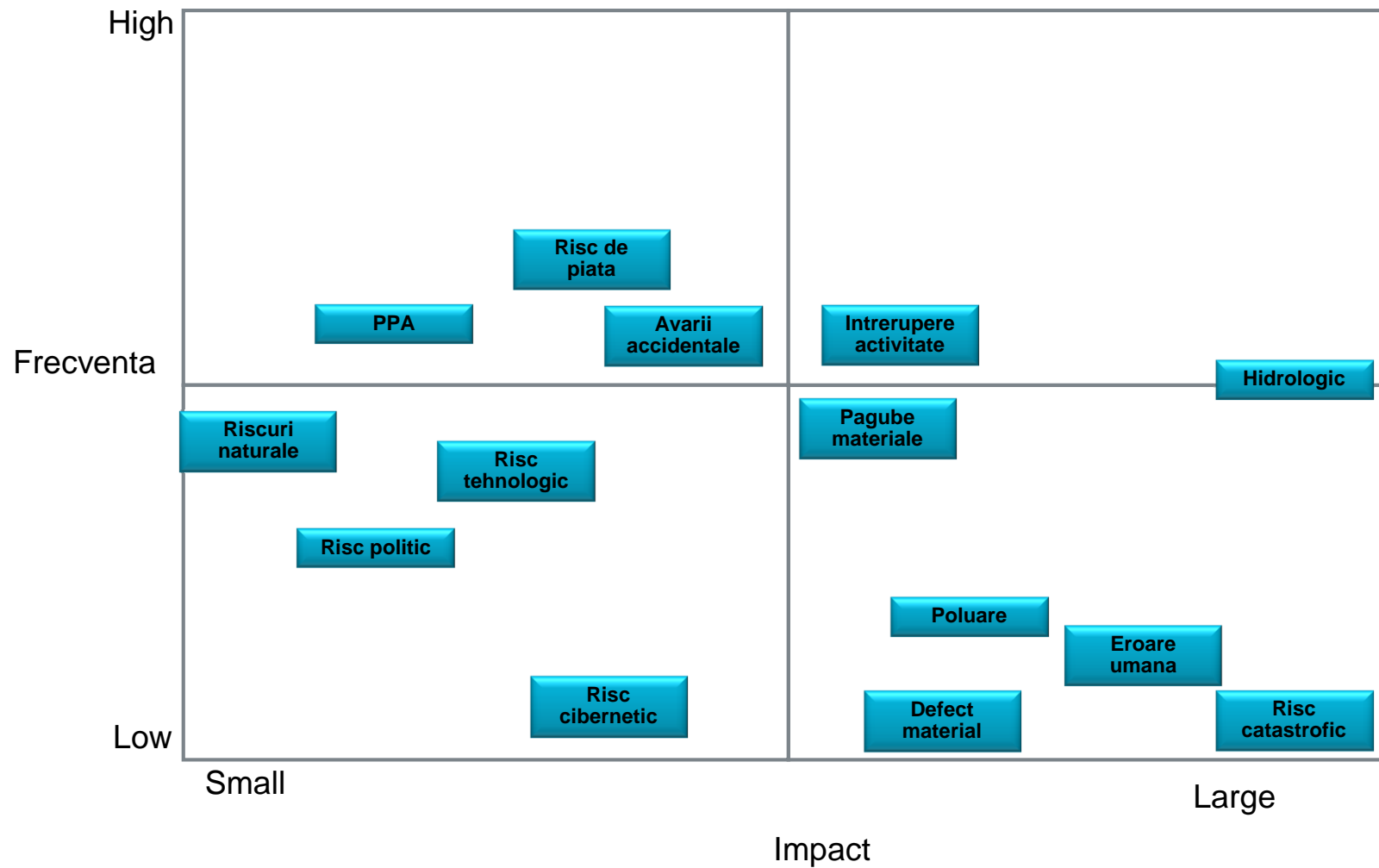
Sursa: Wikipedia

Managementul hidrocentralelor Universul contractual

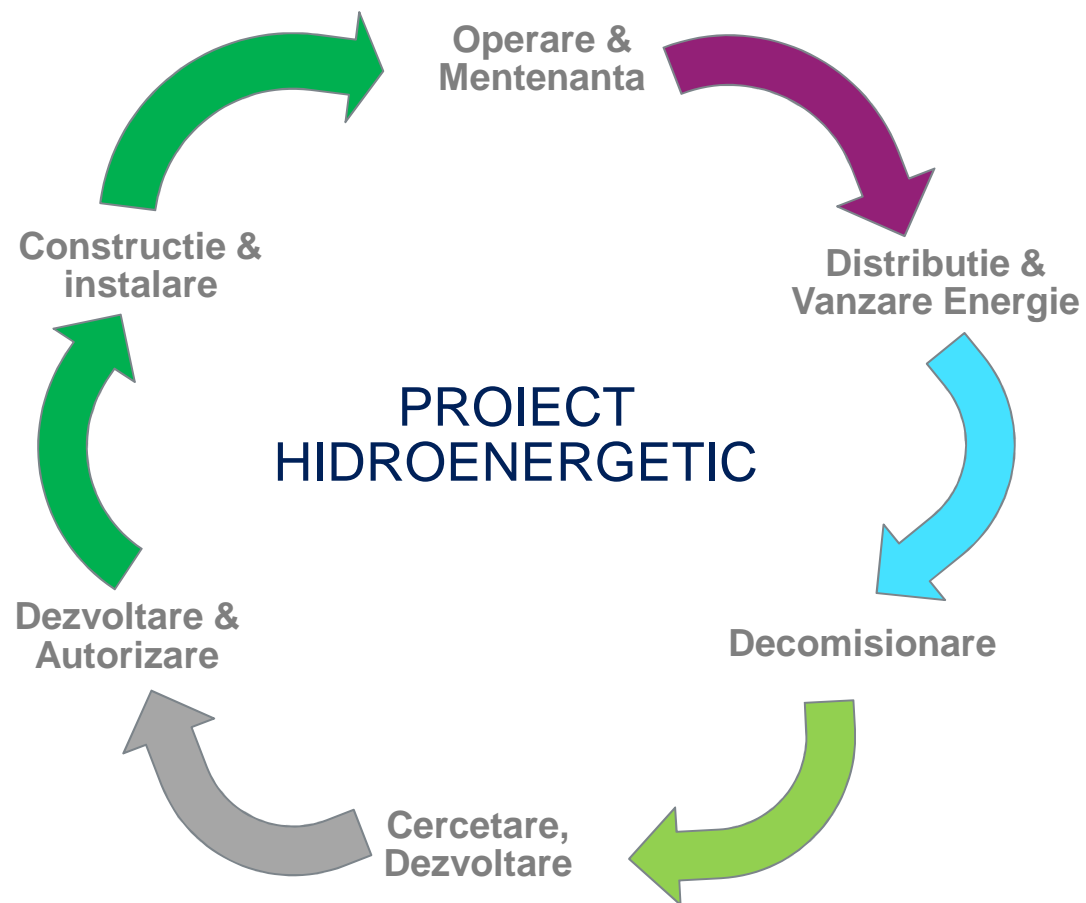


Harta riscurilor

Hydro risk map 2014

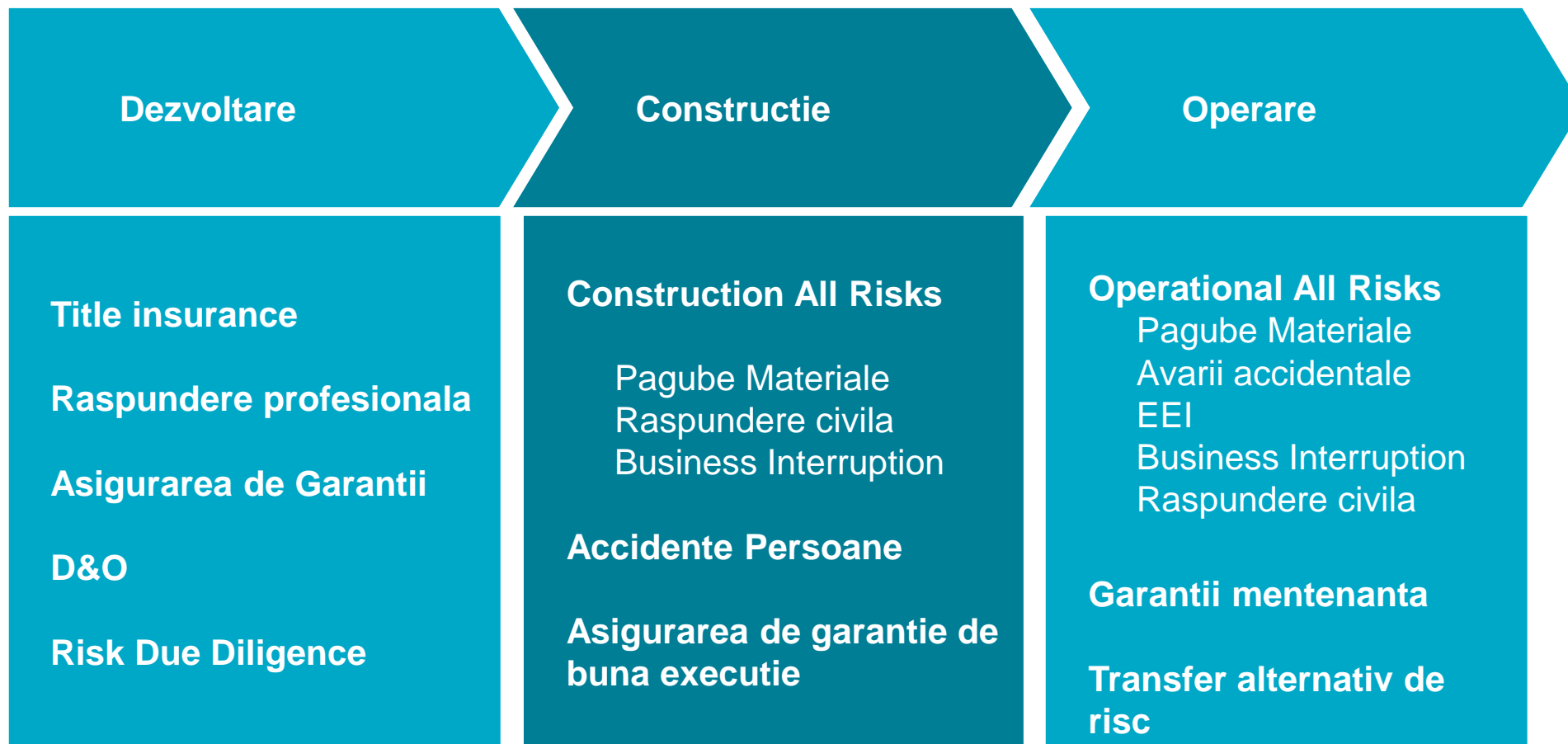


Ciclul de exploatare al unui proiect hidroenergetic



Etapele de dezvoltare al proiectelor hidroenergetice

Solutii de transfer al riscurilor



- Principal: Finantator & Dezvoltator

- Principal: Antreprenor General & Subcontractori

- Principal: Proprietar/Beneficiar

Exemple Daune. Marsh Energy Practice

Location	Loss Type	Description	Amount paid (Mill USD)
Latin America	Operational PD	Earthquake damage	34,801
Asia	Operational PD	Fire at hydro-treatment plant	1,462
Latin America	Operational PD	Damage to pipeline from bacteria induced corrosion	1,912
Europe	Operational PD	Damage to pipeline	12,180
Europe	Operational PD	High pressure pipeline	5,974

Exemple de daune

Cedare baraje - cutremur



Locatie:
Taiwan - October 1999

Locatie: Lake Delhi, Est Iowa, SUA
24 Iulie 2010



Spargere bagaraj – risc catastrofic

DE CE MARSH ROMANIA?



Marsh Romania

- Subsidiara Marsh Inc. (www.marsh.com), New York, lider mondial in consultanta de risc si brokeraj in asigurari
- Liderul pietei de brokeraj in asigurari si consultanta de risc din Romania
- Birouri in Bucuresti, Cluj si Timisoara
- 90 de angajati specializati pe industrii si linii de asigurari
- Cifra de afaceri: peste 8 mil US\$; prime plasate peste 60 mil US\$ (2012)
- Portofoliu: >600 clienti, companii multinationale si romanesti, din orice industrie
- Acces direct la resursele si expertiza retelei internationale a Marsh



SELECTED TECHNOLOGIES >>



- BLADE FAILURE DUE TO LIGHTNING STRIKE
- CABLE DAMAGE
- COLLISION (OFFSHORE)
- ELECTRICAL FAILURE
- FATIGUE AND CORROSION DAMAGE
- FIRE IN NACELLE
- FIRE/EXPLOSION IN TRANSFORMER
- INCREASED MARINE EXPOSURE

WIND



THERMAL AND PHOTOVOLTAIC

- DUST CAKES
- FIRE
- INVERTER FAILURE
- MOISTURE INGRESS
- STORM DAMAGE, TO MIRRORS, SOLAR REFLECTORS, PV PANELS
- THEFT

THERMAL

- SOLAR HEAT RECEPTOR FATIGUE FAILURE
- THERMAL OIL HEAT EXCHANGER FAILURE

SOLAR



- FATIGUE FAILURE OF STRUCTURE
- INCREASED MARINE EXPOSURE
- POWER CABLE FAILURE
- PROTOTYPE TECHNOLOGY RISK

WAVE & TIDAL



- BUSINESS INTERRUPTION: BREAKDOWN RESULTING IN WATER DISCHARGE WITHOUT GENERATION; DELAYED INTERVENTION IN CASES OF REMOTE MONITORING
- DAMAGE TO TURBINE
- ELECTRICAL FAILURE
- FLOODING
- SEASONAL/ANNUAL WATER AVAILABILITY

HYDRO

BIOMASS
ENERGY FROM WASTE



- ENVIRONMENTAL LIABILITIES ASSOCIATED WITH FUEL HANDLING AND STORAGE
- EXPLOSION/FIRE
- FUEL SUPPLY AVAILABILITY AND VARIABILITY
- MACHINERY BREAKDOWN
- QUALITY OF MATERIALS USED IN CONSTRUCTION
- RESOURCE PRICE VARIABILITY
- WASTE DISPOSAL IN THE EVENT OF BOILER OUTAGE



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Capital social 100.000 RON

Operator de date cu caracter personal nr. 16514