



II Workshop YEF ITCOLD

Lo YEF - Young Engineers  
Forum, l'anello di  
congiunzione tra vecchie e  
nuove generazioni di  
esperti di dighe

Santa Sofia (FC)

Centro Operativo di Capaccio

Giovedì 09 Maggio 2019, 08.45 -18.00



**Romagna Acque**  
Società delle Fonti

# How Hydrology meets the world of Dams

Ludovica Ruggeri

**Enel Green Power**

O&M Hydro Italy D&CIS

Venezia-Mestre

[ludovica.ruggeri@enel.com](mailto:ludovica.ruggeri@enel.com)

CON IL PATROCINIO DI

**I** CONSIGLIO NAZIONALE  
DEGLI **INGEGNERI**





## MAIN ACTIVITIES:

Hydrological & Hydraulic Risk



Snow Bulletin



Capability Forecast

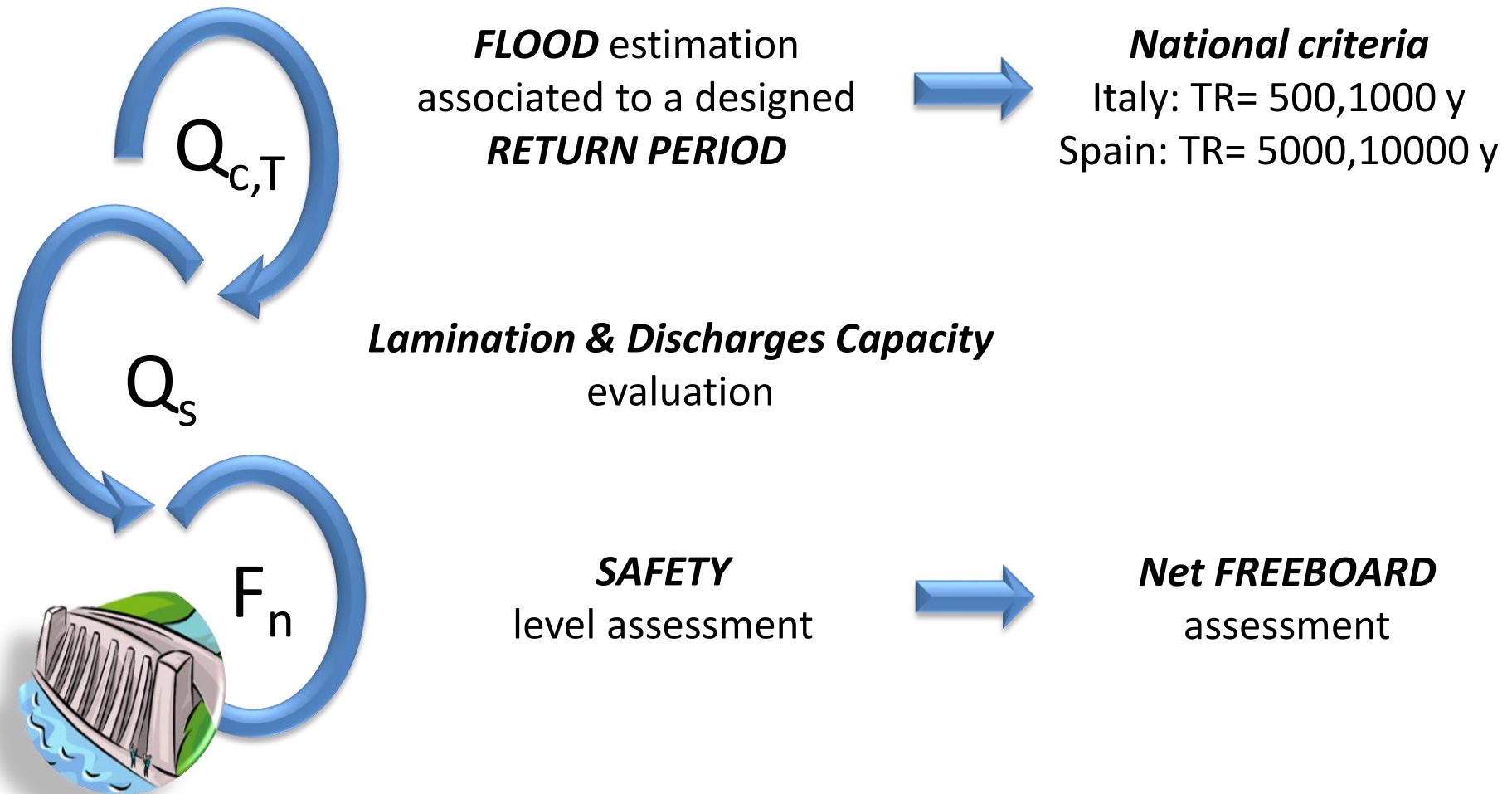


Flow Forecast





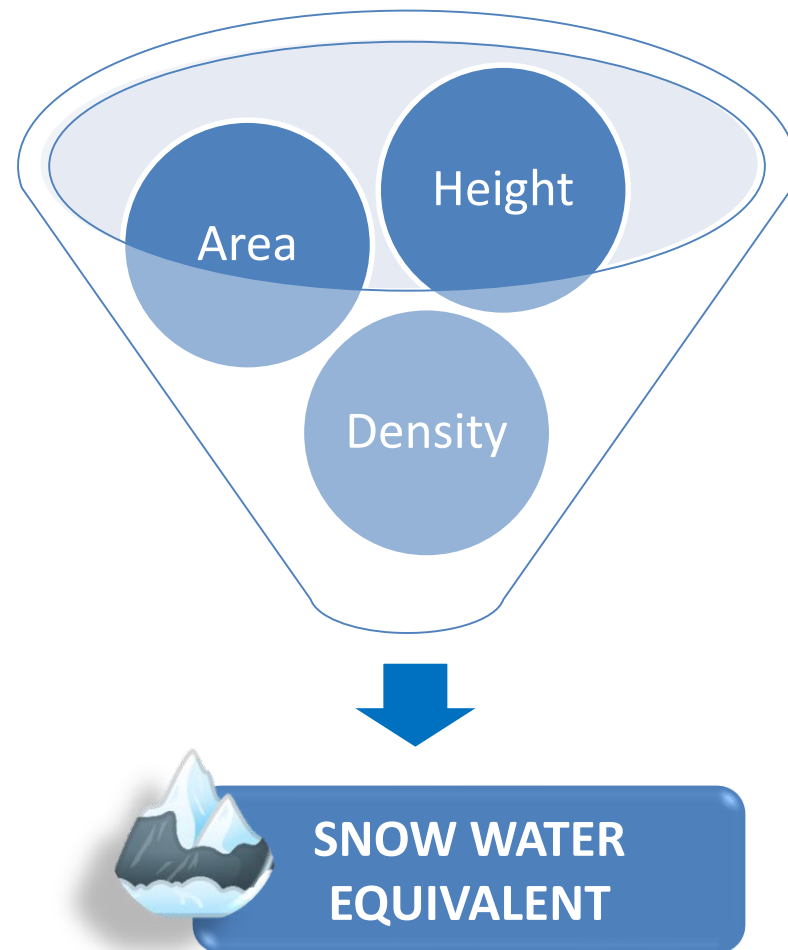
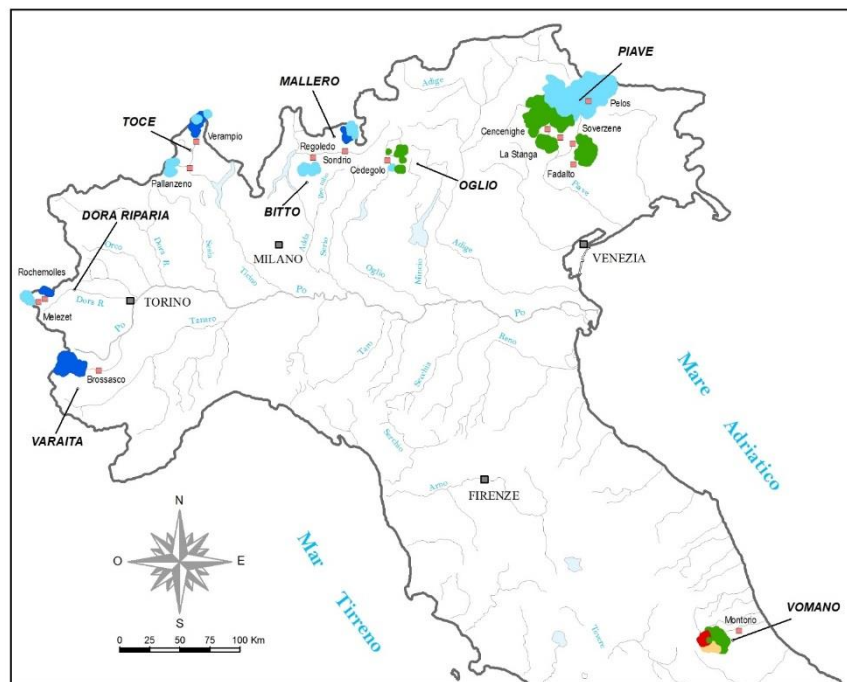
## HYDROLOGICAL & HYDRAULIC RISK



# SNOW BULLETIN



«Travel  
Companion  
since 1970»





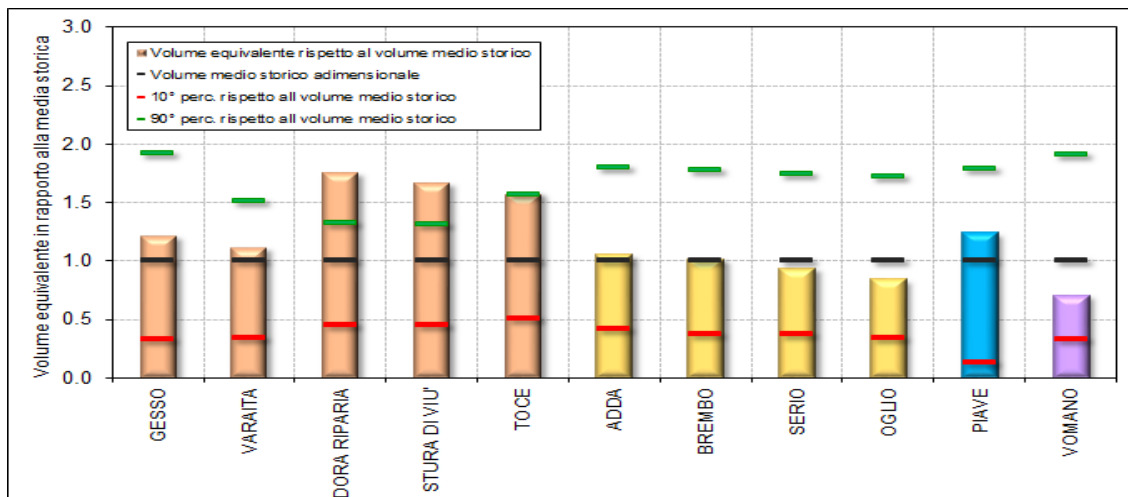
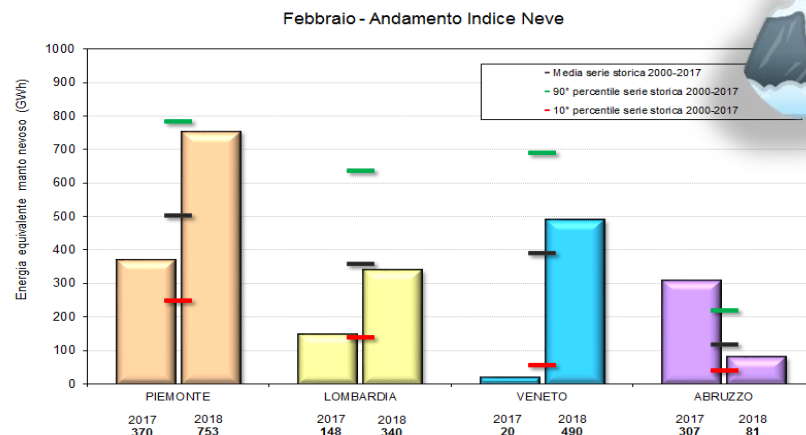
## SNOW BULLETIN

**9 Campaigns (Feb – Jun)**

**4 Regions (Italy)**

**11 Watercourses**

**44 Reservoirs**



*“Knowing the SNOW  
today means knowing  
the WATER tomorrow”*



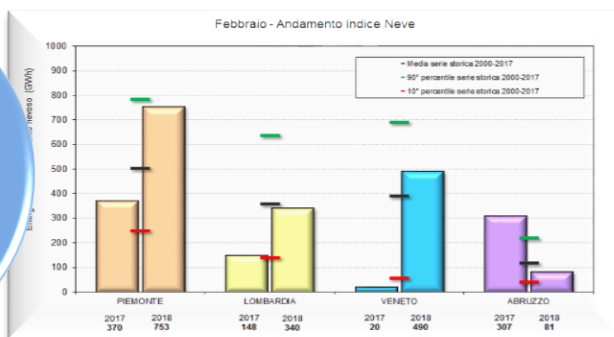
## CAPABILITY FORECAST

### CAPABILITY

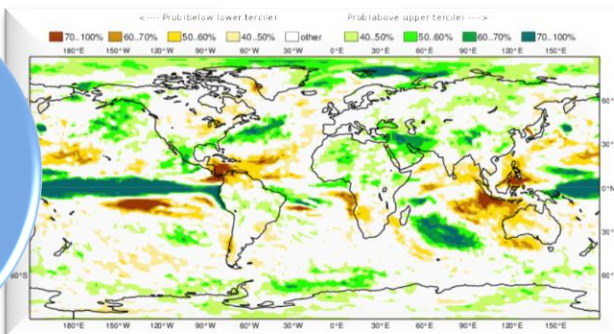
*Maximum amount of energy that could be product by a plant or a watercourse*



SNOW  
(Bulletin)



Seasonal  
Forecast



C  
A  
P  
A  
B  
I  
L  
I  
T  
Y

**ITALY**

**+ 3 Months**

**Homemade**

**8 Countries**

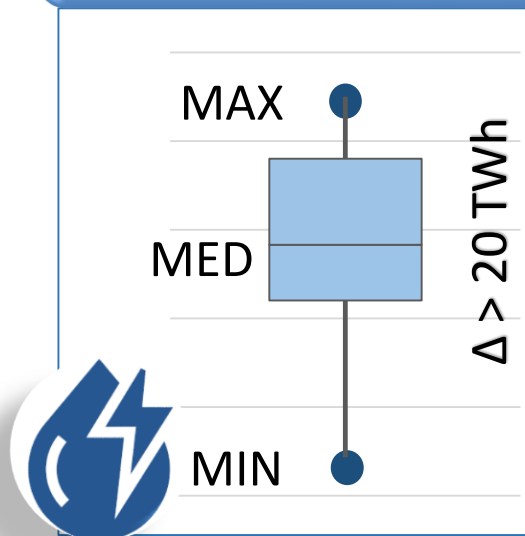
**+ 6 Months**

**2 Providers**



## CAPABILITY FORECAST

### Annual Capability Variability

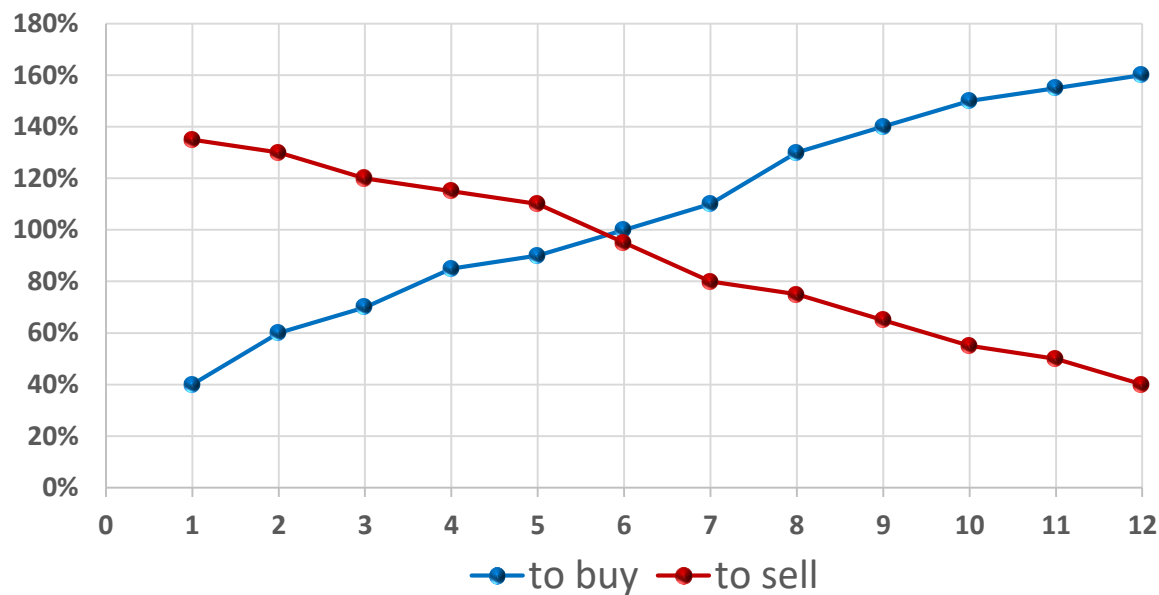


*Decreasing  
the  
variability*



*If you know your deficit or surplus of energy  
you can choose the most convenient time to  
sale or purchase*

### kWh economic value







## FLOW FORECAST



### ENERGY SALES

*The sooner  
you sell the energy,  
the more you will earn.*



### FLOOD MANAGEMENT

*Knowing  
the timing & the entity  
of a flood could help in  
managing the dam.*







## OTHER ACTIVITIES:

**Ecological Flow  
Evaluation**

**Seasonal P&T  
Forecast**

**Lamination Plans**

**Dams Discharge  
Curves**

**Rivers Hydraulic  
Analysis**



II Workshop YEF ITCOLD

Lo YEF - Young Engineers  
Forum, l'anello di  
congiunzione tra vecchie e  
nuove generazioni di  
esperti di dighe

**Santa Sofia (FC)**

Centro Operativo di Capaccio

Giovedì 09 Maggio 2019, 08.45 -18.00



**Romagna Acque**  
Società delle Fonti

# THANK YOU FOR YOUR ATTENTION

**Ludovica Ruggeri**

**Enel Green Power**

O&M Hydro Italy D&CIS

Venezia-Mestre

[ludovica.ruggeri@enel.com](mailto:ludovica.ruggeri@enel.com)

CON IL PATROCINIO DI

**I** CONSIGLIO NAZIONALE  
DEGLI **INGEGNERI**

