

Seasonal forecasting for water management in different certainty and reliability contexts



A

PRELIMINARY QUESTIONS

Professional background :

☐ Hydrology / ☐ Climate / ☐ Meteorology / ☐ Economy / ☐ Other:

Sector:

☐ Energy / ☐ Water resources / ☐ Risk prevention / ☐ Agriculture / ☐ Health /
☐ Other:

Role / Task in the company :

☐ Forecaster / ☐ Decision-maker / ☐ Trader / ☐ Researcher / ☐ Consultant /
☐ Other:

Experience :

☐ < 5 years / ☐ 6-10 years / ☐ 11-15 years / ☐ 16-25 years / ☐ > 25 years

Country :

REMEMBER THE RULES!

Your initial budget is: **50 000** tokens

If you cannot provide water to Thursty town for the season (60 Mm³ on June 1st),
you get a fine of **- 10 000**

If you decided to sell surplus water:

- and you have more than 100 Mm³ on June 1st, you gain:

+ 6 000 if you first sold in March

+ 4 000 if you first sold in April

+ 2 000 if you first sold on May 1st

- and you don't reach 100 Mm³ on June 1st, you lose **- 12 000** because you did
not provide Thursty Town and lose reputation

If you had to contact neighbouring water providers, you pay:

- 1 000 if you informed them as early as March

- 2 000 if you informed them in April

- 5 000 if you informed them on May 1st

B

ROUND 1

Start budget: 50 000

		Wait & see	Do nothing	Sell surplus water	Contact neighbours
Year 1	March	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	April	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	May	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	June 1 st	50 000 + - =			
Year 2	March	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	April	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	May	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	June 1 st + - =			
Year 3	March	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	April	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	May	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	June 1 st + - =			
Year 4	March	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	April	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	May	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	June 1 st + - =			
Year 5	March	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	April	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	May	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	June 1 st + - =			

Final budget:

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**C**

ROUND 2

Previous budget + 10 000 :

Default 0
Silver -1000
Gold -2000

			Wait & see	Do nothing	Sell surplus	Contact neighbours	
Y 1	Membership:	March	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> worthy <input type="checkbox"/> acceptable <input type="checkbox"/> not worthy
	<input type="checkbox"/> Default	April	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/> Silver	May	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/> Gold	June 1+.....-.....=.....				
	Y 2	Membership:	March	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Default		April	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Silver		May	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Gold		June 1+.....-.....=.....				
Y 3		Membership:	March	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> Default	April	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/> Silver	May	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/> Gold	June 1+.....-.....=.....				
	Y 4	Membership:	March	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Default		April	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Silver		May	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Gold		June 1+.....-.....=.....				
Y 5		Membership:	March	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> Default	April	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/> Silver	May	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/> Gold	June 1+.....-.....=.....				

Final budget:

D

QUESTIONS & DISCUSSION

How useful did you find the following information in your decision-making?

	Not useful	Slightly useful	Useful	Very useful	Did not use it
Reliability information					<input type="checkbox"/>
Forecast range					<input type="checkbox"/>

What minimum level of reliability would allow you to make a forecast-based decision?

☐ 0 (always wrong) / ☐ 20 / ☐ 40 / ☐ 60 / ☐ 80 / ☐ 100 (perfect)

What minimum level of certainty would allow you to make a forecast-based decision?

☐ 0 (climatology) / ☐ 20 / ☐ 40 / ☐ 60 / ☐ 80 / ☐ 100 (deterministic)

From which month were you willing to make a decision for June 1st?

☐ Mar / ☐ Apr / ☐ May

Have your decision criteria changed during the game? If so, how?

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Comments

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