

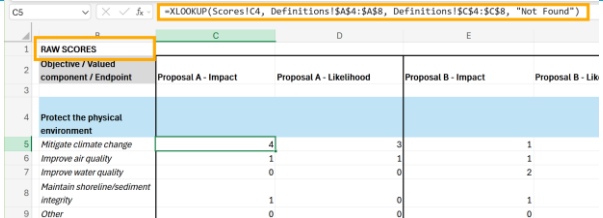
Context and Objectives

This is an annotated write-up of the evaluation template used in Workshop 2 with National Research Council Canada on May 28th, 2025. The objective of this supplementary document is to provide an explanation of the template design, underlying formulas, and how certain elements can be modified and tailored for future use.

Overview of the Worksheets

Worksheet	Content
Direct Ranking	Where the user can assign their “gut-check” preference towards each of the alternatives for yielding direct ranking results.
Weights	Where the user can assign the weightings to scale of impact versus likelihood of impact, as well as all available objectives and sub-objectives.
Scores	Where the user can assign their perceived scale and likelihood of impacts to be brought by each alternative, with respect to each of the objectives and sub-objectives.
Calculations	Where the user’s evaluation is translated to weighted scores of objectives and sub-objectives. Eventually, final weighted scores for all alternatives are calculated by embedded formulas.
Definitions	Where the numerical values of likelihood of impact and scale of impact can be modified.

Explanation of the Embedded Formulas

Graphic	Flow
<p>The user’s evaluation of the scale and likelihood of impact in the Scores worksheet is converted to numerical values within the RAW SCORES table in the Calculations worksheet.</p>	 <p>Extract of the Calculations worksheet.</p>

The conversion is based on the setting in the **Definitions** worksheet, and the exact numerical values can be modified at any time.

	A	B	C
1			
2			
3	Impact	Description	Numerical Value
4	N/A	No potential impact on this objective described.	0
5	Limited	Impact is identified but small in magnitude or restricted to a narrow application context (e.g., communities, region, timeframe, sector), with limited ability to scale beyond.	1
6	Moderate	Impact is meaningful in magnitude, for give application context, with potential to scale beyond.	2
7	Substantial	Major magnitude of impact; targets a substantial fraction, with multiple application contexts (e.g., communities, region, timeframe, sector).	3
8	Transformation	Magnitude of impact is systemic; shifts understanding in paradigmatic way, or technology, policies, practice, and behavior at scale.	4
9			
10	Likelihood	Description	
11	N/A	No potential impact on this objective described.	0
12	Very Unlikely	No clear mechanism for achieving the objective; significant barriers with no feasible mitigation.	0
13	Unlikely	Weak causal link to the objective; major obstacles exist with limited plans to address them.	1
14	Moderate	Some evidence supporting effectiveness; challenges exist, but partial strategies for overcoming them are provided.	2
15	Likely	Clear mechanism for impact with supporting evidence and rationale; most obstacles have feasible solutions.	3
16	Very Likely	Mechanisms for impact well-supported; robust evidence, theory, or precedent; few barriers, with clear and effective mitigation strategies.	4

Extract of the **Definitions** worksheet.

In the next **WEIGHTED SCORES** table of the **Calculations** worksheet, the raw scores are first discounted to decimal values, then multiplied by the assigned weightings of the corresponding sub-objectives in the **Weights** worksheet.

C44 $=C5/4*(Weights!$D5/100)$

	B	C	D
40	WEIGHTED SCORES		
41	Objective / Valued component / Endpoint	Proposal A - Impact	Proposal A - Likelihood
42	Protect the physical environment	6.5	4
43	Mitigate climate change	0.2	0.15
44	Improve air quality	0.05	0.05
45	Improve water quality	0	0
46	Maintain shoreline/sediment integrity	0.075	0
47	Other	0	0
48	TOTAL	0.325	0.2

Extract of the **Calculations** worksheet.

D5 20

	C	D
3	Objective / Valued component / Endpoint	CATEGORY WEIGHT
4	Protect the physical environment	20
5	Mitigate climate change	20
6	Improve air quality	20
7	Improve water quality	30
8	Maintain shoreline/sediment integrity	30
9	Other	0
10	Category Total - must sum to 100	100

Extract of the **Weights** worksheet.

The weighted scores of sub-objectives under the same objective are summed up to reach a total value in the **Calculations** worksheet.

C49 $=SUM(C44:C48)$

	B	C	D
40	WEIGHTED SCORES		
41	Objective / Valued component / Endpoint	Proposal A - Impact	Proposal A - Likelihood
42	Protect the physical environment	6.5	4
43	Mitigate climate change	0.2	0.15
44	Improve air quality	0.05	0.05
45	Improve water quality	0	0
46	Maintain shoreline/sediment integrity	0.075	0
47	Other	0	0
48	TOTAL	0.325	0.2

Extract of the **Calculations** worksheet.

The total value is then multiplied by the objective's weighting from the **Weights** worksheet to reach a weighted score for the objective.

B		C
40	WEIGHTED SCORES	
41	Objective / Valued component / Endpoint	Proposal A - Impact
42		
43	Protect the physical environment	6.5
44	Mitigate climate change	0.2
45	Improve air quality	0.05
46	Improve water quality	0
47	Maintain shoreline/sediment integrity	0.075
48	Other	0
49	TOTAL	0.325

Extract of the **Calculations** worksheet.

Moving onto the FINAL HIGH LEVEL SCORES table in the same **Calculations** worksheet, an objective's high-level score for an alternative is reached by: (1) multiplying the above weighted scores with the corresponding weightings of impact in the **Weights** worksheet, (2) combining the values for likelihood and scale of impacts.

B		C	D
84			
85	FINAL HIGH LEVEL SCORES		
86			
87	Objective / Valued component / Endpoint	PROPOSAL A	PROPOSAL B
88			
89	Protect the physical environment	5.75	7.7
90	Mitigate climate change	3.7	1.6
91	Improve air quality	1	0.7
92	Improve water quality	0	3.9
93	Maintain shoreline/sediment integrity	1.05	1.5
94	Other	0	0
95	TOTAL	5.75	7.7

Extract of the **Calculations** worksheet.

B		C	D
40	WEIGHTED SCORES		
41	Objective / Valued component / Endpoint	Proposal A - Impact	Proposal A - Likelihood
42			
43	Protect the physical environment	6.5	4
44	Mitigate climate change	0.2	0.15
45	Improve air quality	0.05	0.05
46	Improve water quality	0	0
47	Maintain shoreline/sediment integrity	0.075	0
48	Other	0	0
49	TOTAL	0.325	0.2

Extract of the **Calculations** worksheet.

C		D
44		
45	Score Category	SCORE WEIGHT
46	Impact	70
47	Likelihood	30
48	TOTAL - MUST SUM TO 100	100

Extract of the **Weights** worksheet.

The same logic goes for a sub-objective's high-level score for an alternative.

C30 $= (C44 * \text{Weights}! \$D\$4 * \text{Weights}! \$D\$46 / 100) + (D44 * \text{Weights}! \$D\$4 * \text{Weights}! \$D\$47 / 100)$

	B	C	D	E
86				
87	Objective / Valued component / Endpoint	PROPOSAL A	PROPOSAL B	PROPOSAL C
88				
89	Protect the physical environment	5.75	7.7	9.1
90	Mitigate climate change	3.7	1.6	2.6
91	Improve air quality	1	0.7	2.6
92	Improve water quality	0	3.9	3.9
93	Maintain shoreline/sediment integrity			
94	Other	1.05	1.5	0
95	TOTAL	5.75	7.7	9.1

Extract of the **Calculations** worksheet.

Note that the total value by summing up all sub-objectives' high-level scores should be identical with the objectives' high-level scores.

	B	C	D	F
86				
87	Objective / Valued component / Endpoint	PROPOSAL A	PROPOSAL B	
88				
89	Protect the physical environment	5.75	7.7	
90	Mitigate climate change	3.7	1.6	
91	Improve air quality	1	0.7	
92	Improve water quality	0	3.9	
93	Maintain shoreline/sediment integrity			
94	Other	1.05	1.5	
95	TOTAL	5.75	7.7	

Extract of the **Calculations** worksheet.

By adding all objectives' high-level scores together, the final weighted scores for all alternatives can be reached.

C128 $= C126 + C121 + C116 + C112 + C108 + C100 + C96 + C89$

	B	C	D
121	Social equity and inclusiveness	7.375	8.25
122	Stakeholder engagement and inclusiveness	3.25	3.25
123	Knowledge generation and mobilization	4.125	5
124	Other	0	0
125	TOTAL	7.375	8.25
126	Other	0	0
127			
128	TOTAL PROPOSAL	38.8375	41.1125

Extract of the **Calculations** worksheet.