Supplementary Material S2

Pair-wise Comparison Matrices

Tables S5 to S8 below illustrate the resulted pairwise comparison matrices for Layers 3, 4 and 5.

Table S5. 2nd Layer – Pairwise Comparison Matrix

ASSETS	Drone (Airborne Component)	Ground Control Station	Communication Links	Regulations/ Policies	Environmental Conditions	Operator	Area of Operations
Drone (Airborne Component)	1,00	3,00	2,00	3,00	2,00	3,00	3,00
Ground Control Station	0,33	1,00	1,00	3,00	0,33	1,00	3,00
Communication Links	0,50	1,00	1,00	3,00	0,25	3,00	3,00
Regulations Policies	0,33	0,33	0,33	1,00	0,25	0,50	2,00
Environmental Conditions	0,50	3,00	4,00	4,00	1,00	4,00	4,00
Operator	0,33	1,00	0,33	2,00	0,25	1,00	3,00
Area of Operations	0,33	0,33	0,33	0,50	0,25	0,33	1,00

Table S6. 3rd Layer – Pairwise Comparison Matrix

VULNERABILITITES	Ineffective power source	High power consumption	Defective components	Wrong Handling	High Susceptibility to wireless attacks	High Susceptibility to Extreme Weather Conditions	Lack or Violation policies/regulations	Faulty Operation	Lack of Expertise/Training/Skills	Susceptibility to Adversarial Actions
Ineffective power source	1,00	3,00	1,00	3,00	2,00	0,50	3,00	3,00	3,00	3,00
High power consumption	0,33	1,000	0,33	3,00	0,33	0,25	3,00	3,00	2,00	3,00
Defective components	1,00	3,00	1,00	3,00	1,00	0,33	3,00	3,00	3,00	3,00
Wrong Handling	0,33	0,33	0,33	1,00	0,33	0,33	2,00	1,00	1,00	2,00
High Susceptibility to wireless attacks	0,50	3,00	1,00	3,00	1,00	0,33	3,00	2,00	2,00	2,00
High Susceptibility to Extreme Weather Conditions	2,00	4,00	3,00	3,00	3,00	1,00	4,00	3,00	3,00	3,00
Lack or Violation policies/regulations	0,33	0,33	0,33	0,50	0,33	0,25	1,00	0,50	0,50	0,33
Faulty Operation	0,33	0,33	0,33	1,00	0,50	0,33	2,00	1,00	1,00	0,50
Lack of Expertise/Training/Skills	0,33	0,50	0,33	1,00	0,50	0,33	2,00	1,00	1,00	0,50
Susceptibility to Adversarial Actions	0,33	0,33	0,33	0,50	0,50	0,33	3,00	2,00	2,00	1,00

Table S7. 4th Layer – Pairwise Comparison Matrix

THREATS	Power Failure	Equipment Failure	Control Loss	Wireless Attack	Extreme Weather Conditions	Collision w/ Objects	Unsuccessful Navigation	Physical Attacks
Power Failure	1	1,00	3,00	2,00	2,00	2,00	3,00	3,00
Equipment Failure	1,00	1	2,00	0,50	0,50	0,50	2,00	2,00
Control Loss	0,33	0,50	1	0,50	0,33	0,33	1,00	0,50
Wireless Attack	0,50	2,00	2,00	1	0,50	3,00	3,00	2,00
Extreme Weather Conditions	0,50	2,00	3,00	2,00	1	3,00	3,00	3,00
Collision w/ Objects	0,50	2,00	3,00	0,33	0,33	1	2,00	3,00
Unsuccessful Navigation	0,33	0,50	1,00	0,33	0,33	0,50	1	0,50
Physical Attacks	0,33	0,50	2,00	0,50	0,33	0,33	2,00	1

Table S8. 5th Layer – Pairwise Comparison Matrix

REQUIREMENTS	Confidentiality	Integrity	Availability	Safety	Reliability	Maintainability	Survivability
Confidentiality	1	0,33	0,25	0,17	0,25	0,25	0,33
Integrity	3,00	1	0,25	0,17	0,25	0,25	0,33
Availability	4,00	4,00	1	0,25	1,00	0,33	0,33
Safety	6,00	6,00	4,00	1	4,00	3,00	3,00
Reliability	4,00	4,00	1,00	0,25	1	0,33	0,33
Maintainability	4,00	4,00	3,00	0,33	3,00	1	0,50
Survivability	3,00	3,00	3,00	0,33	3,00	2,00	1

Table S9. 2nd Layer – Column Normalization and Relative Importance Calculation (Sample Calculation)

ASSETS	Drone (Airborne Component)	Ground Control Station	Communication Links	Regulations/ Policies	Environmental Conditions	Operator	Area of Operations
Drone (Airborne Component)	1,00	3,00	2,00	3,00	2,00	3,00	3,00
Ground Control Station	0,33	1,00	1,00	3,00	0,33	1,00	3,00
Communication Links	0,50	1,00	1,00	3,00	0,25	3,00	3,00
Regulations Policies	0,33	0,33	0,33	1,00	0,25	0,50	2,00
Environmental Conditions	0,50	3,00	4,00	4,00	1,00	4,00	4,00
Operator	0,33	1,00	0,33	2,00	0,25	1,00	3,00
Area of Operations	0,33	0,33	0,33	0,50	0,25	0,33	1,00
Column Sum*	**3,3333**	**9,6667**	**9,0000**	**16,5000**	**4,3333**	**12,8333**	**19,0000**

**Column Sum - obtained from the summation of the elements of each column*

ASSETS	Drone (Airborne Comp.)	Ground Control Station	Commun. Links	Regulations/ Policies	Environm. Conditions	Operator	Area of Operations
Drone (Airborne Component)	0,3000	0,3103	0,2222	0,1818	0,4615	0,2338	0,1579
Ground Control Station	0,1000	0,1034	0,1111	0,1818	0,0769	0,0779	0,1579
Communication Links	0,1500	0,1034	0,1111	0,1818	0,0577	0,2338	0,1579
Regulations/Policies	0,1000	0,0345	0,0370	0,0606	0,0577	0,0390	0,1053
Environmental Conditions	0,1500	0,3103	0,4444	0,2424	0,2308	0,3117	0,2105
Operator	0,1000	0,1034	0,0370	0,1212	0,0577	0,0779	0,1579
Area of Operations	0,1000	0,0345	0,0370	0,0303	0,0577	0,0260	0,0526

Table presents the normalised values resulted from the division of the elements of each column by the sum of that column; for example, first row – first column: 1 divided by 3.33, which is the sum of the elements of the column, gives 0.30.

The sum of the elements in each resulting row (to obtain a 'row sum') divided by the number of elements in the row, results to the relative importance of this element. Assumimg the risk element of Drone (Airborne Component): 0.30 + 0.3103 + 0.2222 + 0.1818 + 0.4615 + 0.2338 + 0.1579)/7, gives 0.2668, which is the relative importance of 'Drone'.

In a similar way values of Tables S6, S7 and S8 are normalised and then treated so as to calculate the relative importance of all the identified risk elements.