# Purpose of this template

This is a template for a **UAS Risk assessment report** to be part of an application for technical approval of a military UAS in Norway.

# Instructions to the applicant

* The applicant shall document a technical risk assessment of the UAS for which approval is sought. The process for the risk assessment to be followed, is described below in chapter **UAS Risk assessment**.
* The UAS Risk assessment report shall have a unique document reference ID according to the applicant’s (the OEM or the UAS operator) document management system.
* The UAS Risk assessment report shall be attached to the MAA-NOR Form MUASTA as part of the application for technical approval of a military UAS.   
  The document reference ID shall be inserted in block 5.20 of MAA-NOR Form MUASTA for the application.

# UAS Risk assessment

The applicant’s knowledge of the design and, if available, operational data, shall be used to identify technical hazards associated with the UAS.

1. List all identified hazards in *Table 4  Risk assessments*.  
   The hazards already listed shall always be considered, and the applicant is encouraged to add hazards that are not listed.
2. For each of the identified hazards:
3. describe a **Cause** and an **Effect**.
4. assign a **Severity** category from *Table 2  Severity Categories*.
5. assign a qualitative assessment of the **Probability** that the hazard will occur, using values from *Table 3  Probability Levels*.
6. Enter an ***Initial risk*** from *Table 1  Risk level codes*, as a combination of **Severity** and **Probability**.
7. Describe viable mitigating action(s) where possible, to reduce the risk level to the lowest possible.
8. Enter a ***Residual risk*** from *Table 1  Risk level codes*, as a combination of **Severity** and **Probability**.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Severity**  **Probability** | *Catastrophic* (**1**) | *Critical* (**2**) | *Marginal* (**3**) | *Negligible* (**4**) |
| *Frequent* (**A**) | **1-A** | **2-A** | **3-A** | **4-A** |
| *Probable* (**B**) | **1-B** | **2-B** | **3-B** | **4-B** |
| *Occasional* (**C**) | **1-C** | **2-C** | **3-C** | **4-C** |
| *Remote* (**D**) | **1-D** | **2-D** | **3-D** | **4-D** |
| *Improbable* (**E**) | **1-E** | **2-E** | **3-E** | **4-E** |



Table 1  Risk level codes

|  |  |  |
| --- | --- | --- |
| **Description** | **Severity category** | **Mishap Result Criteria** |
| *Catastrophic* | **1** | Could result in one or more of the following: Death, Permanent total disability, Irreversible significant environmental impact. |
| *Critical* | **2** | Could result in one or more of the following: Permanent partial disability, injuries or occupational illness that may result in hospitalization of at least three personnel, reversible significant environmental impact. |
| *Marginal* | **3** | Could result in one or more of the following: Injury or occupational illness resulting in one or more lost work day(s), reversible moderate environmental impact. |
| *Negligible* | **4** | Could result in one or more of the following: Injury or occupational illness not resulting in a lost work day, minimal environmental impact. |

Table   Severity Categories

|  |  |  |  |
| --- | --- | --- | --- |
| **Description** | **Probability level** | **For an individual UAV** | **For the whole fleet of UAVs** |
| *Frequent* | **A** | Likely to occur often in the life of an item. | Continuously experienced. |
| *Probable* | **B** | Will occur several times in the life of an item. | Will occur frequently. |
| *Occasional* | **C** | Likely to occur sometime in the life of an item. | Will occur several times. |
| *Remote* | **D** | Unlikely, but possible to occur in the life of an item. | Unlikely, but can reasonably be expected to occur. |
| *Improbable* | **E** | So unlikely, it can be assumed occurrence may not be experienced in the life of an item. | Unlikely to occur. but possible. |

Table   Probability Levels

UAS Risk assessment report

| ***HAZARD*** | ***CAUSE*** | ***EFFECT*** | ***INITIAL RISK*** | ***MITIGATION*** | ***RESIDUAL RISK*** |
| --- | --- | --- | --- | --- | --- |
| **GENERAL** |  |  |  |  |  |
| Lithium Battery Fire/Explosion |  |  |  |  |  |
| Unsuccessful Launch |  |  |  |  |  |
| Unsuccessful Recovery |  |  |  |  |  |
| **LOSS OF CONTROL** |  |  |  |  |  |
| Loss of Command Link |  |  |  |  |  |
| Loss of Vehicle Position  Information |  |  |  |  |  |
| Loss of Flight Reference Data |  |  |  |  |  |
| Control surface failure |  |  |  |  |  |
| Loss of Propulsion |  |  |  |  |  |
| Loss of Alternator or PMU |  |  |  |  |  |
| Loss of Ground Station |  |  |  |  |  |
| **SAFEGUARD FAILURES** |  |  |  |  |  |
| Airspace violation |  |  |  |  |  |
| Mid-air Collision |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

Table   Risk assessments

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**Template version history**

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| --- | --- | --- |
| **Date** | **Version** | **Description** |
| xx.xx.2024 |  |  |

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