



Guidance Material on Intrinsic Ground Risk Evaluation

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This GM provides information on how to assess the Operational Scenario for the intrinsic Ground Risk. The distinction between VLOS and BVLOS is not further addressed here (see EASA GM for further Guidance). The difference between controlled ground area, sparsely populated environment¹, populated environment and gatherings of people is delineated in this document.

A **controlled ground area** is defined as the intended UAS operational area that only involves active participants. Active participants are those persons directly involved with the operation of the UAS or fully aware that the UAS operation is being conducted near them. Active participants are fully aware of the risks involved with the UAS operation and have accepted these risks. Active participants are informed on and able to follow relevant effective emergency procedures and/or contingency plans. The assurance that there will be non-active participants in the area of operation is under full responsibility of the operator (Murzilli, 2019).

A **sparsely populated area** is defined in Switzerland as an area with less than 10 inhabited houses including a 100 m radius around it (BAZL, 2014). A populated area is defined as an area with more than 10 inhabited houses including a 100 m radius around it.

Gatherings of people means gatherings where persons are unable to move away due to the density of the people present (EASA, 2019).

For the purpose of the evaluation of populated and sparsely populated areas, the swisstopo map can be used:

<https://map.geo.admin.ch/?topic=swisstopo&lang=en&bgLayer=ch.swisstopo.pixelkarte-farbe>

The population density layer of the swiss topo map can be used to validate the operational scenario assessment:

<https://map.geo.admin.ch/?topic=are&lang=en&bgLayer=ch.swisstopo.pixelkarte-grau&catalogNodes=954,959,965&layers=ch.bfs.volkszaehlung->

¹ The terms environment and area are used interchangeably in the context of the SORA



References

- BAZL. (14. Mai 2014). *Verordnung über das Abfliegen und Landen mit Luftfahrzeugen ausserhalb von Flugplätzen*. Von <https://www.admin.ch/opc/de/classified-compilation/20100182/index.html> abgerufen
- EASA. (2019). Easy Access Rules for Unmanned Aircraft Systems. In *GM1 Article 1 Subject Matter* (S. 16).
- Murzilli, L. (2019). JARUS guidelines on Specific Operations Risk Assessment (SORA).