

Towards a standing method to assess Switzerland's vulnerabilities

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- 5) **Organizational unit:** Departement Maschinenbau und Verfahrenstechnik, direkt, Institut für Energietechnik, direkt, Kroger, Wolfgang, kroeger@mavt.ethz.ch, LZ=03292

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- 7) **ETH researcher(s):** no entry

- 8) **External researcher(s):** no entry

- 9) **Funding source(s):**
 - Industry

- 10) **Partner organizations:** no entry

- 11) **Short Summary:** A systematic and, operational response to a set of concerns expressed at a high level of responsibility within the DDPS, following a warranted involvement in the perception on “situations” and “risks” in the trail of 9/11/2001.

- 12) **Keywords:** Engineering Sciences, Technology

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13) Project description:

Goal

A systematic and, operational response to a set of concerns expressed at a high level of responsibility within the DDPS, following a warranted evolvement in the perception on “situations” and “risks” in the trail of 9/11/2001.

Methodology

This evolvement was captured by the formal decision that the DSP commissions a renewed and comprehensive risk analysis of the Swiss system, in the light of new vulnerabilities at hand. It was encouraged by the conceptual effort that the notions of risk and vulnerability are re-evaluated. Both risk and vulnerability are, to a considerable extent, a matter of culture, and of faith: 'The risk analysis favors anticipation, the development of politics and strategies; and 'The vulnerability analysis provide for a verification and consolidation of the political and strategic choices.' An important element in the study was the recognition of the potential value that the System Theory might demonstrate, in grounding to grasp, describe, measure, anticipate, and mitigate, vulnerabilities (vulnerability analysis at political-strategic level, as a permanent process; a method for analysis of vulnerabilities at cantonal/national strategic-operational levels; DSS tools oriented towards vulnerability analysis in Switzerland; Future trends related to the study of vulnerability at national level).

Results

The main work accounts for the above tasks are covered in the form of a computer code package. It has extensively been used in the development of the study, thus providing the Contractor with an independent capability to reconstruct several findings and perhaps infer others, as deemed appropriate. Short model presentations and computer run reports on the application of the following models to the Swiss case: Indicators Inter-comparison and Correlations; Targeting Strategic Goals through the Index Method; Targeting Governance Robustness via the Matrix Method; Targeting Penetrability of Complex Systems; Targeting Resilience under Operational Stress – a Probabilistic Resilience Analysis Working Case; Targeting Territorial Vulnerabilities. The modules offer the possible implementation of an assess-and-rank solution to describing a local municipal authority's vulnerability.

14) Popular description:

A systematic and, operational response to a set of concerns expressed at a high level of responsibility within the DDPS, following a warranted evolvement in the perception on “situations” and “risks” in the trail of 9/11/2001.

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15) Graphics: no entry

16) Publications: no entry

17) Links to important web pages: no entry