

**Short abstract. 19th International Conference on
Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes
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Abstract title: JRODOS for nuclear emergencies: Implementation and connection to the emergency organisation work flow in Switzerland

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Preferred topic: 2 “Environmental impact assessment: Air pollution management and decision support systems.”

Summary of the objectives, main findings and results

JRODOS stands for Java Real-time Online DecisiOn Support system and is a modular programme intended for use in radiological emergency protection. Switzerland has implemented this software as primary prognosis tool for the impact assessment of radiological emergencies at nuclear installations. As a result, Switzerland has become a major promoter of this system and has been instrumental in furthering its development.

Within the work flow of ENSI’s emergency response organisation (ERO), JRODOS covers the part of airborne dispersion modelling and consequences prognosis. Its activity concentration and dose prognosis results are automatically exported to a visualisation module, where the larger part of ENSI’s ERO products are created with the push of a button; the remaining products currently have to be created by hand using forms. These products serve as basis for the recommendation of protective actions for the population to our ERO partners and the decision maker. They also help in planning the measurements which will be made once the radioactive cloud has passed, to assess the ground contamination and its impact on the food chain. All these products, together with periodic technical assessment reports, are uploaded to the national electronic situation overview accessible to all ERO partners. Thus, they are not only the visual outflow from ENSI’s ERO – they’re the highly-visible beacon of ENSI’s work within Switzerland’s national emergency response network.

As part of ENSI’s continuous improvement process, we revised and expanded the list of products provided to our ERO partners. This resulted in an extended product list and new visualisation forms, requiring additional operator action as stated above. A special focus was on the layout and presentation of our results, with the aim of ‘speaking the language of our partners’. The latter cannot be stressed enough: without an implicit mutual understanding, an effective emergency response is impossible. By modifying and expanding our products, we have increased the strength of ENSI’s recommendations, improved the efficiency of the national emergency response network, and ensured that decisions can be based on the best available information and taken in a timely manner.