

## **Master thesis**

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## **Emergency Response in Action: Expertise, Imaginaries, and Communication in Nuclear Crisis**

### **Abstract**

The complex socio-techno-natural disaster at Fukushima provided an important occasion for an international display of emergency response and nuclear crisis communication in action. While being only one of several such occasions, the Fukushima nuclear accident revealed that current public expectations concerning the management of a nuclear crisis and the actual implementation of emergency response actions do not meet. On the one hand, the technologies, organizational structures, and guidelines designed for managing nuclear emergencies by relevant government agencies are based on experiences from the past, notably with the Chernobyl accident from 1986. On the other hand, the Fukushima accident showed that nuclear emergencies do not follow a foreseeable course of events. These insights ask for rethinking nuclear emergency response in a broader sociotechnical context rather than in a strictly technocratic one.

The present work aims to complement the existing STS literature on sociotechnical imaginaries by analyzing some of the post-containment sociotechnical imaginaries of the nuclear, which emerged after the Three Mile Island and Chernobyl accidents. Further, it examines how decision-support systems for nuclear emergency management (DSNE) systems became an important nuclear risk management technology in Germany and how the post-containment imaginaries of the nuclear and the thought collectives and practices formed around DSNE systems influenced each other. Finally, the analysis explores the ways in which the Fukushima accident reshaped the post-containment imaginaries of the nuclear and the community of nuclear experts in Germany.

The results of this research show that, in addition to the technopolitical agendas of their proponents, there is another phenomenon at work that renders sociotechnical imaginaries performative and appealing to experts, politicians, and laypersons. This phenomenon appears to be that of an evolutionary competition between contemporary imaginaries which takes place at all times.