Arctic Safety Conference

Computer-assisted management training for professionals in High Arctic SAR -operations.

Gunhild B Sætren (PhD), Hege C Stenhammer, Natalia Andreassen (PhD), Odd Jarl Borch (PhD)

Nord University, NORDLAB

This paper takes as a starting point the competence needs of managers responsible for the complex crisis response operations in a High Arctic setting. We elaborate on the need for competence on multi-organizational cooperation and coordination at tactical and operational management levels in maritime mass rescue operations (MRO). We look into the special context of High Arctic environments with remoteness, cold climate and a vulnerable environment. Even though the risk of severe accidents in this region is low the consequences may be severe with the loss of life and health when large vessels with a lot of passengers and crew are involved.

In this paper we focus on the relation between competence needs and adequate training schemes for key personnel responsible for coordinating a mass rescue operation in this environment. We illuminate how simulator training may increase the competence related to the managerial roles and especially the coordination of a large number of units and agencies. We in particular emphasize training for management at tactical level (on-scene coordination) involving both the vessel in distress and samaritan vessels, and operational level coordination involving SAR mission controllers and crises response agencies such as the police. We illuminate the contributions that simulator-based training may have with data from the Exercise Isfjord run annually at NORDLAB for students from Norwegian crisis response agencies.

Data from qualitative semi-structured interviews with students, mentors and academic staff revealed the importance of proper preparations of the participant group and the process of building trust among the participants to build a temporary shared situational awareness. Further, increased context-realism and simulator-assisted exercise was found to have a positive effect on the safety training outcome. The simulator created realism and the mentors could add knowledge on the system and best practices. Previous knowledge and trust among the actors were found important as well as adapting the exercise to previous knowledge on both operational context and the emergency response system. This underlines the need for meeting arenas and tailor-made training schemes, including the right composition of the groups training together.

The results reveal that simulation-based exercises with high degree of context-reality as well as realism in the sense of human actions and interactions may provide advanced safety training outcomes. This could meet a broad range of crises as it promotes efficient collaboration between the involved parties, including both public and private.

Figure 1. Factors promoting safety training outcome in emergency exercises in high-risk and high-sensitive environments.