Maritime Safety in The High North
– Risk and Preparedness

Nataliya A. Marchenko1, Odd J. Borch2, Sergey V. Markov3, Natalia Andreassen2

1Department of Arctic Technology, the University Centre in Svalbard, Longyearbyen, Norway
2Bodo Graduate School of Business, University of Nordland, Bodø, Norway
3Institute of Complex Safety, Northern (Arctic) Federal University named after M.V. Lomonosov, Arkhangelsk, Russia

ABSTRACT

Increasing human activity in the Arctic creates great concern about possible accidents and their consequences for life and nature. The sufficient level of preparedness for emergency cases should be defined and secured. On the basis of previous assessment of activity level and risk matrix and analysis of existing search and rescue resources, the estimation of preparedness system has been done. Three regions (mainland Norway, Svalbard area and Russian part of the Barents Sea) are under consideration and comparison. The international collaboration for safety on the sea is very important in the border area.

KEY WORDS: maritime; safety; risk assessment; preparedness; Arctic; navigation; accident;

INTRODUCTION

The modern development of the Arctic creates a need for understanding of the risk factors, risk mitigating tools, and adequate rescue system capacities in the different area. Safe maritime operations in the High North depend on the risk assessment, preparations and preparedness of the companies involved as well as the government. Activities in the Arctic are challenged by limited infrastructure, long distances and harsh weather conditions.

The presented work is the part of MarPART (Maritime preparedness and International Collaboration in the High North) project, where the researchers are responsible for safety organizations of all the countries of Atlantic Sector of the Arctic on the base of activity and risk estimation should find the way of cross-institutional and cross-country partnership (Nord Universitet, 2016). That is especially important on High North with rare population and limited rescue resources.

Activity and probability of accidents differ in various parts of the Arctic, due to geographical, economic and historical reasons.

In this study, we focus in particular on 3 regions: Norwegian areas around Svalbard, along the coast of mainland Norway and on West-Russian Arctic in the Barents Sea up to Novaya Zemlya (Fig.1). This sector creates the gateway to the Arctic and in the case of global warming the development here, especially on Svalbard, will serve as a model for other regions of the Arctic. The situation which we have now on Svalbard (tourist vessel with 3000 passengers on 80°N, for example) can be repeated on Greenland, North of Canada or Franz Josef Land or Novaya Zemlya with characteristic problems. That’s why our study can have global perspective and interest.

Figure 1. Three regions under consideration. Base map is “Norwegian rescue service’s area of responsibility” (red lines) (BarentsWatch, 2013). Key ports and rescue centers are shown