



Sveigjanleg og aðlögunarhæf skipulagsgerð fyrir hafnir. Majid Eskafi og Guðmundur F. Úlfarsson. Háskóli Íslands – mars 2022.

Ágrip skýrsluhöfunda:

Globalization has increased international trade where the contribution of maritime transportation is significant. The projection of future port traffic in terms of vessel call and vessel size provides valuable and fundamental input to capacity planning and management, adjusting the direction of port development.

In this research project, analysis of port traffic is carried out for the Ports of Isafjordur network. The analysis is conducted based on the prediction of port throughput (i.e., containerized and noncontainerized cargo, cruise ship call/passenger) in conjunction with port infrastructure (i.e., quay length, water depth).

Using the time series univariate forecasting method, an exponential smoothing model is developed to project the port throughput. Furthermore, primary and secondary data research are used in this research project.

The results show that vessels with a capacity between 800-1200 TEU come into service by 2050 to handle the increasing projected volume of containerized cargo. Furthermore, an increase in service frequency is expected. Cruise ship calls and average size will continue to increase. Large cruise ships can be accommodated in the (developed) Port of Isafjordur, and the increasing number of cruise ships can be serviced by maximum use of Sudureyri, Flateyri, Thingeyri Ports.

This research project provides useful information for port stakeholders to be more knowledgeable about future port traffic. The results support decision making for planning, design, and in time development/adaptation of the port layers including infrastructure, operation, and services.