

Bibliometric Analysis of Risk Assessment of Inland Maritime Accidents in Bangladesh

Authors : Armana Huq, Wahidur Rahman, Sanwar Kader

Abstract : Inland waterways in Bangladesh play an important role in providing comfortable and low-cost transportation. However, a maritime accident takes away many lives and creates unwanted hazards every year. This article deals with a comprehensive review of inland waterway accidents in Bangladesh. Additionally, it includes a comparative study between international and local inland research studies based on maritime accidents. Articles from inland waterway areas are analyzed in-depth to make a comprehensive overview of the nature of the academic work, accident and risk management process and different statistical analyses. It is found that empirical analysis based on the available statistical data dominates the research domain. For this study, major maritime accident-related works in the last four decades in Bangladesh (1981-2020) are being analyzed for preparing a bibliometric analysis. A study of maritime accidents of passenger's vessels during (1995-2005) indicates that the predominant causes of accidents in the inland waterways of Bangladesh are collision and adverse weather (77%), out of which collision due to human error alone stands (56%) of all accidents. Another study refers that the major causes of waterway accidents are the collision (60.3%) during 2005-2015. About 92% of this collision occurs due to direct contact with another vessel during this period. Rest 8% of the collision occurs by contact with permanent obstruction on waterway roots. The overall analysis of another study from the last 25 years (1995-2019) shows that one of the main types of accidents is collisions, with about 50.3% of accidents being caused by collisions. The other accident types are cyclone or storm (17%), overload (11.3%), physical failure (10.3%), excessive waves (5.1%), and others (6%). Very few notable works are available in testing or comparing the methods, proposing new methods for risk management, modeling, uncertainty treatment. The purpose of this paper is to provide an overview of the evolution of marine accident-related research domain regarding inland waterway of Bangladesh and attempts to introduce new ideas and methods to abridge the gap between international and national inland maritime-related work domain which can be a catalyst for a safer and sustainable water transportation system in Bangladesh. Another fundamental objective of this paper is to navigate various national maritime authorities and international organizations to implement risk management processes for shipping accident prevention in waterway areas.

Keywords : inland waterways, safety, bibliometric analysis, risk management, accidents

Conference Title : ICSMMO 2021 : International Conference on Safety in Maritime and Marine Operations

Conference Location : Tokyo, Japan

Conference Dates : November 11-12, 2021