



“Gheorghe Asachi” Technical University of Iasi, Romania



REFLECTIONS ON USING AUTOMATIC IDENTIFICATION SYSTEM (AIS) DATA IN SHIP EMISSION STUDIES IN THE ACADEMIC LITERATURE

Gizem Kodak

*University of Kyrenia, Faculty of Maritime Studies, Maritime Transportation Management Engineering,
Kyrenia, Mersin 10/ Turkey, e-mail: gizem.kodak@kyrenia.edu.tr*

Abstract

Modern technology allows the ships which constitute the circulation system of the world trade to be monitored 24/7 by the help of Automatic Identification System (AIS) transponders. The large amount of data that was collected generates a valuable source for many different scientific disciplines. Considering that 90% of international trade is carried out by sea, one of the most strategic areas where this data can be used is air quality research. First of all, the high-resolution results provided by dynamic AIS data offer enormous advantages over conventional methods based on fuel estimation. Studies using the AIS database will improve not only the past and present calculations, but also the predictive power of future model studies. Moreover, AIS data is inherently ideal for providing the activity data much needed by the Tier 3 approach used by European Monitoring and Evaluation Programme (EMEP). Therefore, it is critical that the use of AIS data to become widespread around the world in calculating ship emissions. In this study, the nature and structure of AIS data were explained and the share of its usage in the academic literature was investigated. Thus, it is aimed to raise awareness to encourage academic access to AIS data.

Key words: AIS data, Automatic Identification System, ship emissions

Received: March, 2022; Revised final: September, 2022; Accepted: September, 2022; Published in final edited form: September, 2022
