

## **The Role of Technology in Achieving Environmental Policy Goals in the MTS**

### **ABSTRACT**

The maritime transportation system (MTS), a truly multi-modal industry, is in the unique position to be able to implement technologies that diffuse from other areas and combine with innovation from within the industry to achieve continued advancement. There is currently an increasing need for better environmental performance in the industry, generally through new or adopted technologies. Previous research has explored the independent ideas of individual technological or environmental policy achievements. This paper addresses the role of technology in achieving environmental policy goals in the marine shipping industry, and considers the efficacy of various types of environmental policy mechanisms in promoting appropriate technologies. Two case studies involving environmental impacts associated with the MTS will be evaluated, air pollution and non-indigenous species introductions. These are two examples of environmental problems that were initially regulated using environmental standards, but show potential to address the problems with more innovative policy approaches. Better understanding of how the industry creates and diffuses technologies and the manner in which various policy mechanisms promote these activities could lead to more effective long-term solutions for environmental improvements.