PERSPECTIVES FROM THE WORLD AND TURKEY FOCUSING ON HAYDARPAŞA AND MARTAŞ PORT WASTE RECEPTION FACILITIES

Dr. Neslihan DOĞAN-SAĞLAMTİMUR&Emre SUBAŞI

Department of Environmental Engineering, Faculty of Engineering, Nigde University, 51245 Nigde, Turkey

Marine pollution is major part of the environmental pollution. A series of measures and decisions are taken in many countries over the world under the coordination of the International Maritime Organization (IMO) that is a maritime organization of the United Nations.

MARPOL 73/78 prepared by the IMO is one of the international conventions applied to prevent contamination of ships through the seas. Turkey signed MARPOL (73/78) Convention in 1983 together with countries bordering the Mediterranean and the Black Sea in order to prevent of pollution from oil (bilge water, sludge and slop, etc.), noxious liquid substances in bulk, harmful substances carried by sea in packaged form, sewages and garbages disposal of ships underway in these countries.

The ship-port interface is recognized as being of critical importance in reducing illegal discharges of ship-generated waste and cargo residues to the sea by managing the availability and use of port waste reception facilities (WRFs).

In this study Haydarpaşa and Martaş Port WRFs were selected as two multifunctional large-scale and mid-scale, respectively, examples operated by state and private sector in Turkey. At the WRFs, which are operated for the treatment of ship-generated wastes in Turkey, the oily water received is treated at the treatment plant, and while the separated oil is sold to private sector (cement and lime factories, dairy industries, etc.), treated water is discharged into the sea.

Figure 1. The location of the Martaş (a) and Haydarpaşa (b) Port WRF.

Although the pollutants originating from ships may lose some of their properties, they still contain oil products as well as fuels. If the waste is treated appropriately to regain its fuel quality, there would be a significant source of income for the WRF. In Turkey, there are no facilities to recover basic quality of the waste, and moreover, facilities that may derive optimum value from such waste are not licensed to do so. Development of the WRFs would make possible to recover basic quality of the waste, including oil products. Such a source of income requires the identification of a pricing strategy as well as quality criteria, legislative requirements, etc.

Presently, in determining operation performance of a WRF, samples from effluent are analyzed and comparisons are made compliance with the discharge standards according to the Water Pollution Control Regulation (WPCR) Tables 4, 11 and 19 that are the most appropriate in evaluating the performance of WRF treatment plants.

However, these tables do not fully cover the present situation. For this reason, new tables, which are prepared according to specifications of WRFs and discharge standards of the receiving environment chosen accordingly, should be arranged.

WRFs do not only consist of treatment plant, and as such, an efficiency analysis taking other parts into consideration and evaluating the WRF as a whole must be conducted.

This study was supported by the Unit of Research Project of Nigde University.