

ABSTRACT

Title of the Research:

EVALUATING THE SUSTAINABLE GREEN SEAPORTS (SGP) IN EGYPT: CASE STUDY OF ALEXANDRIA AND ELDEKHILA SEAPORTS.

Degree: M.SC.

Seaport plays a crucial role in the facilitation of global trade movement, and it is the backbone of global supply chain and logistics in the world. Due to the abnormal global environmental change, the world face serious problem such as global warming, water pollution, waste disposal, air pollution, ozone depletion, space extinction, and rapid consumption of energy issue. Consequently, the concept of green port (GP) was advocated to mitigate the continued destruction to the Earth. The previous studies showed that the GP concept is a sustainable development port, which does not only meet the environmental requirements, but also raises the indicators of the country's economy. The main objective of the sustainable green seaports SGP is to create good ecological environment and high economic efficiency in the port, to ensure the overall consistent and sustainable construction of the community economy- environmental ecosystem in seaport, and to establish the leading position of port in modern transportation system for the Integral industrial, logistics, and port services.

The aim of this research is to focus on the benefits and barriers of a broad field called SGP concept, discuss their factors, used technologies and their usage in different areas in maritime transport through a wide range of seaports services. Furthermore, to investigate the requirements of applying the SGP concept in Egyptian seaports.

A single case study was conducted on one of the main Egyptian seaports, which is "Alexandria and El Dekheila ports" In order to evaluate the current status of both the ports toward sustainable green seaports. Through in-depth interviews carried with two parties: the first party was the Participants from the Port Authority, and the second party a working company inside the port society, which is Alexandria container handling company. Then, a semi-structured questionnaire was conducted based on the feedback got from the primary

phase targeting freight forwarders companies, cargo handling companies, shipping companies and shipping agencies in order to identify the current problems on Alexandria and El Dekheila ports and best practice to overcome the problems found. It was found that both ports lack from (the potentials for achieving electricity self-sufficiency, the ability to prevent the ships to dispose their ballast water inside its own waters, the ability to prohibit the ships from carrying out the maintenance works in its depth, the ability to replace its diesel-operated equipment with electric ones, or using liquefied natural gas in the operation of machines and equipment, and finding other alternatives for unclean energy.

Afterwards, the study has discussed the factors and barriers of implementing SGP concept on Alexandria and El Dekheila ports. Finally, the results have showed that both ports close to the sustainable green seaports concept in terms of the implemented practices but at the same time they are suffering from the mentioned barriers above. It was also found that the implementation of SGP concept requires a Public Private Relationship in order to overcome the stated Barriers.