

Green Ports: Innovation Adopters or Innovation Developers

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Abstract : A green port is the result of a sustainable long-term strategy adopted by an entire port infrastructure, therefore by the set of actors involved in port activities. The strategy aims to realise the development of sustainable port infrastructure focused on the reduction of negative environmental impacts without jeopardising economic growth. Green technology represents the core tool to implement sustainable solutions, however, they are not a magic bullet. Ports have always been integrated in the local territory affecting the environment in which they operate, therefore, the sustainable strategy should fit with the entire local systems. Therefore, adopting a sustainable strategy means to know how to involve and engage a wide stakeholders' network (industries, production, markets, citizens, and public authority). The existing research on the topic has not well integrated this perspective with those of sustainability. Research on green ports have mixed the sustainability aspects with those on the maritime industry, neglecting dynamics that lead to the development of the green port phenomenon. We propose an analysis of green ports adopting the lens of ecosystem studies in the field of management. The ecosystem approach provides a way to model relations that enable green solutions and green practices in a port ecosystem. However, due to the local dimension of a port and the port trend on innovation, i.e., sustainable innovation, we draw to a specific concept of ecosystem, those on local innovation systems. More precisely, we explore if a green port is a local innovation system engaged in developing sustainable innovation with a large impact on the territory or merely an innovation adopter. To address this issue, we adopt a comparative case study selecting two innovative ports in Europe: Rotterdam and Genova. The case study is a research method focused on understanding the dynamics in a specific situation and can be used to provide a description of real circumstances. Preliminary results show two different approaches in supporting sustainable innovation: one represented by Rotterdam, a pioneer in competitiveness and sustainability, and the second one represented by Genoa, an example of technology adopter. The paper intends to provide a better understanding of how sustainable innovations are developed and in which manner a network of port and local stakeholder support this process. Furthermore, it proposes a taxonomy of green ports as developers and adopters of sustainable innovation, suggesting also best practices to model relationships that enable the port ecosystem in applying a sustainable strategy.

Keywords : green port, innovation, sustainability, local innovation systems

Conference Title : ICMLP 2023 : International Conference on Maritime Logistics and Ports

Conference Location : Amsterdam, Netherlands

Conference Dates : January 23-24, 2023