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**Title:** The Port of Sines. A lever for the sustainable development of Alentejo Region?

### **Extended Abstract**

This work project is being done in the context of the *PhD in Geography and Territorial Planning – NOVA FCSH - UNL* with the objective to investigate the role of the Port of Sines as a potential driver of sustainable development in Alentejo region, Portugal. The study as the aim of assessing whether the Port of Sines effectively contributes to the sustainable development (economic, social and environmental dimensions) of Alentejo.

Contextualising the infrastructure (Port of Sines) in time (referring to its history, origin and evolution) and space (how it occupies space), and focusing on the impact it has (or doesn't have) on the sustainable development of the region, we believe this study could contribute to a better understanding of the impact of a Port Cluster on the territory in which it is located, through a dual perspective, both from the point of view of the Port (and its cluster) and from the point of view of the Territory.

There are currently two situations that lead us to wonder about the possible evolution of the Port of Sines Cluster towards becoming more influential and interrelated with its main Hinterland. On the one hand, the port's growing movement of containerised cargo (both transshipment and as a port of entry and exit for goods) is a consequence of its characteristics (a natural deep-water port and geostrategic position on the world's maritime trade routes), and on the other hand, the expected completion of the Sines - Poceirão - Caia rail freight section (with work in progress), which will strengthen the competitiveness of the intermodal transport offer in the interior of the Iberian peninsula and consequently its connection to Europe. This new situation could lead to greater development in the Alentejo region's export sectors, and consequently create a leverage effect for regional development.

From a holistic and integrated perspective of analysing the influence of the Port of Sines on the development of the region, it is also proposed to assess whether there is a "clustering" in the sense of evolving into a regional maritime "micro-cluster", analysing the interrelationships between the different sub-sectors, namely between the maritime-port sector and the other sub-sectors (traditional and emerging) of the blue economy.

In 2020, APS (Administração dos Portos de Sines e do Algarve) carried out a critical analysis and reflection on the Port of Sines in order to define strategic options for the future. This work was carried out with the support of the Catholic University (CEGEA - Centre for Studies in Management and Applied Economics). Within the scope of this work, the ambition was "*To establish and lead an efficient and dynamic Iberian multi-port system, fully integrated with long and short-distance transport networks - intercontinental maritime, and intermodal capillarity - bringing competitiveness to the companies established in its hinterland and, exerting an attractiveness effect, stimulating the development of the economic and social fabric in its area of influence.*" And the value proposition "*To function as a port infrastructure to respond to the "connectivity" of Iberian markets with the maritime routes that serve international trade, under competitive "cost/price" conditions; which support the competitiveness of economic activities based in the "hinterland" that interacts with it. This is done by coordinating intermodal transport logistics networks - strictly within the port and, whenever necessary, outside of it - and by honouring the commitment to contribute to the environmental sustainability and economic and*

*social development of the port community, especially the ZILS/ZAL.*" (APS, Administração dos Portos de Sines e Algarve and Universidade Católica Portuguesa).

The strategic plan defined for the Port of Sines is summarised in the following strategic initiatives:

Sines: a port for the world | strengthening the contribution of the Iberian hinterland - i.e. regional markets - to bulk and containerised loading and unloading, offering centrality and access to international markets.

Sines: the world at the port | Capitalise on ZILS and ZALS, encouraging the installation of companies that benefit from the proximity of the port and contribute to strengthening its movements.

Sines: a port of the future | designing a port infrastructure that is capable of integrating modern ICT (Information and Communication Technologies) into its business model and in line with the desired preservation of environmental, social and economic balance (APS, Administração dos Portos de Sines e Algarve and Universidade Católica Portuguesa, Católica Porto Business School, 2020).

Since this strategic plan was approved in 2020, it is now opportune and relevant to carry out a study on the impact of the Port of Sines on regional development (based on the concept of sustainable development, including the 3 dimensions: economic, social and environmental). At the same time, European, national and regional public policies provide a set of political guidelines and financial resources that may, or may not, contribute to the development of the Alentejo region. These same policies, in the regional development strategies they have defined, identify the Port of Sines as a strategic asset *"The Sines port, industrial and logistics area, which combines heavy infrastructures with productive skills and know-how in the automation of ship and goods dispatch processes, components that are strongly integrated into the national economy and the European and world economy, encompassing one of the most significant components of the internationalisation of the regional economy."* (Alentejo Regional Coordination and Development Commission, 2020), this strategy identifies the Port of Sines as a *"port and logistics complex benefiting from excellent natural conditions in terms of sea beds and accessibility, pursuing an investment trajectory in which new port projects stand out (expansion of terminal XXI and new Vasco da Gama terminal), Port Tech Cluster Port of Sines - knowledge transfer accelerator, new refinery, transatlantic cable and renewable gas production centre, such as green hydrogen, using photovoltaic energy."* (Alentejo Regional Coordination and Development Commission, 2020).

We believe that this set of investments, including those derived from the improvement of the freight railway network linking Sines - Poceirão - Caia, will have a positive influence on development, at least in the territory closest to the Alentejo coast, in terms of economic activity, social activity (volume of employment and resident population) and could possibly set an example in terms of the environment (use of renewable energies).

It is also worth highlighting some case studies on the impact of port clusters, which are pertinent examples for this study project. In this context, the study on the impact of the Port of Lisbon on economic development at local and regional level carried out by A. M. P. Santos, R. Salvador, JCQ Dias and C. Guedes Soares (Santos et al., 2018) is very interesting, not only for the results and conclusions reached, but also for the method used.

In this work, a methodology was developed that made it possible to assess the economic impact of a port on two scales, at local and regional level, combining an Input-Output analysis with data collection that followed both a top-down and bottom-up approach, thus overcoming some of the difficulties that usually arise in economic impact studies. The study considered the economic impact of the port cluster, as well as the socio-economic importance of the industries that use the ports, using several layers of analysis separately in order to better identify direct and indirect impacts (Santos et al., 2018).

Another interesting study in this field was carried out by R. Daniels and T. Gregori (Gregori, 2013) on the case of the Friuli Venezia Giulia region's port system. These authors followed a methodology in which they combined a top-down and bottom-up approach based on interviews and detailed data at company level, drawing up a bi-regional table (I-O) with a special breakdown of the 12 port-related sectors in the Friuli Venezia Giulia region. With this study, they aimed to identify the main economic and industrial characteristics of the region's port system and to identify the role of the port system in the regional economy (Gregori, 2013).

Considering the literature review and the starting question, the derived questions were defined: What are the characteristics and potential of the Port of Sines cluster? What are the main sectors operating in the Port of Sines cluster? What are the main sectors in the Alentejo region that can benefit from the Port of Sines? What inter-sectoral and institutional relationships exist within it that can boost the sustainable development of the region? Are there any public policy measures at European, national and regional level that encourage the Alentejo region (economically, socially and environmentally) to benefit from the existence of the Port of Sines? And how can a region benefit from a port cluster for the sustainable development of its territory?

The proposal suggests a mixed methodology (qualitative and quantitative), since it is considered relevant to analyse impact from a comprehensive perspective and based on both top-down and bottom-up data collection. The application of Porter Diamond Model by Benito et al (Benito, 2003) with the Norwegian Maritime Cluster and by Salvador (Salvador, 2016) in the case of the Portuguese Maritime Cluster are recognized as useful to understand Maritime Clusters, as well as the mixed methodology used for the analyse of the impact of Port Clusters (Santos et al, 2018) using the case of the Port of Lisbon.

**Keywords:** Port Cluster; Maritime Cluster; Sines; Alentejo; Sustainable Development