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## **OVERVIEW OF EUROPEAN ECO-INDUSTRIAL PARKS: EVALUATION OF INDUSTRIAL SYMBIOSIS POTENTIAL**

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### **Abstract**

Eco-industrial parks (EIPs) and other eco-industrial developments have different histories, sizes, locations and organizational forms. In order to characterize them several classifications and models have been elaborated. In this work for the first time the existing European EIPs are overviewed with the help of four classifications. These classifications are based on (1) the stage of the development of the area, (2) the starting point, (3) the activity of the EIP and (4) the location of the companies involved in the EIP. However, these classifications are not sufficient to seek for the symbiotic relationships and therefore evaluate the industrial symbiosis potential in the EIPs. Because of this, there is a need to propose a systematic approach and create a tool supporting industrial symbiosis in the EIPs. For this purpose in this work much attention is particularly paid to the presence of symbiotic relationships and the potential to establish them in the studied EIPs. Next, an appropriate algorithm, being a tool for industrial symbiosis evaluation, is elaborated. It shows that the number of industrial enterprises and the diversity of the companies involved in the EIP are important factors to establish industrial symbiosis. The algorithm indicates that only four out of eighteen European EIPs studied are likely to develop industrial symbiosis in the future. This algorithm could be applied by management teams of the existing and planned EIPs.

*Key words:* anchor company, classification, eco-industrial development, industrial ecosystem symbiotic relationships

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