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ADVANTAGES AND OSTACLES FOR THE DEVEOPMENT OF INDUSTRIAL SYMBIOSIS IN LATVIA

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ABSTRACT

Industrial ecology has borrowed its fundamental principles from natural ecosystems, and within this framework, the links between industrial companies are compared to the ecosystems as if information, energy and resource flows between the companies would be organized in an effort to imitate living organisms. If the industry, like an ecosystem, would be organized based on reflexive linkages and cooperation, it would be possible to organize better industrial processes and to ensure efficient and sustainable production. Industrial symbiosis seeks to ensure that the involved companies reach a collective benefit, which is accomplished by finding a suitable use for any waste or process by-product from one company within the manufacturing process of another company. By implementing such resource-saving measures any company can become more environmentally friendly and reduce its impact on the environment. But for the development of industrial symbiosis the involvement of several separate companies to create raw material, resource and energy networks between them is required. This is when the national legislation interferes with the development of industrial symbiosis. It can both enhance such ties, if the country has well-organized and thought-out waste management system and bureaucratic requirements, or limit the formation of industrial symbiosis, if the waste management related regulations incorporated within the legislation create obstacles for the formation of a simple legal relationships between the companies.

The objective of this paper is to determine legislative requirements that promote and limit the development of industrial symbiosis in Latvia. The comparison between Latvia and other European countries is made in order to offer better tools to support industrial symbiosis, more efficient evolvement of waste management system, resource efficiency and sustainable development in Latvia.

Keywords: Industrial ecology, industrial symbiosis, waste management