

## Chapter 5.5

# Communicating Environmental Information on a Company and Inter–Organizational Level

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### ABSTRACT

*The collection, managing and communication of environmental information are nowadays seen as an essential prerequisite for sustainable development. However, ways of generating and exchanging environmental information differ within and between companies. Moreover, the use of highly sophisticated environmental information systems can still be seen at in its infancy. The aim of this chapter is thus to assess ways of the application of environmental information systems for sustainable development, both within and between organizations, can be supported. An empirical analysis of those barriers and obstacles, which inhibit the implementation of environmental information systems, is also carried out. Additionally, we also pay attention to forms of industry wide environmental protection, and take existing cooperation and relationships, sustainable supply chains, and recycling networks into account. For this purpose, basic conditions for the inter-organizational exchange of environmental information are investigated. This provides the basis for identifying means to strengthen the position of environmental protection in connection with inter-organizational exchange of environmental information. Improved methods of implementing environmental information systems within and between companies are developed, thus promoting greater cooperation for sustainable development.*

### INTRODUCTION

In the present time, it is obvious that information and communication technologies have great potential in supporting sustainable development. Environmental information now plays a vital

role in environmental protection, for example via production and processing techniques, pollution control, waste management etc. In former times, internal company activities were the main object of focus in the search for overall sustainable development. Nowadays however, environmental protection and sustainable development reach well beyond company borders,

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although it has to be admitted that these concepts are still not yet widely spread and companies are currently not as aware of the environmental advantages of interorganisational cooperation as they should be. Such cooperation demands that companies include business partners and stakeholders in environmentally related activities. For example, close cooperation with suppliers, customers and public authorities provides for far more effective environmental protection. Here, environmental information has become an indispensable factor, especially in the design and conception phases of inter-organizational cooperation. Furthermore, this specific kind of information is also important for communication with customers. Developing accessible information is thus a key priority, not only for the companies themselves, but also for their partners along the supply chain, and for all customers and business partners in general. However, to date, the potential available remains largely unexploited (see also Hilty et al., 2006).

On looking more closely at the managing and communication of environmental information, it becomes apparent that theory and science in the field of information systems are currently highly sophisticated activities. The same is true concerning the supporting communication systems of environmental information. Matters become ever more complicated when implementation involves more than one company or organisation since the collection, handling and communication of environmental information on such an overarching level are still in their early stages. Therefore, conscious action has to be taken to promote the usage of environmental information systems in order to support environmental protection. The present chapter thus deals with the rather new scientific field concerning the exchange of environmental information on a company-wide and inter-organizational level with a view to facilitating close relationships in sustainable development. Thus, this chapter is dedicated to the topic of supporting the communication

of environmental information systems within companies and in inter-organizational cooperation, in order to enhance industrial environmental protection.

## **Aims of the Chapter**

The aim of this chapter is to identify the barriers and obstacles inhibiting the implementation of operational environmental information systems in companies – both technical and organizational. Based on an empirical survey of Austrian industry, the demands for and the use of specific systems of operational environmental information systems are identified. Possible inconsistencies between theoretical approaches and scientific knowledge and practical applications are thus investigated. Furthermore, the questions of how the exchange of environmental information now takes place and of how appropriate current company systems are is also discussed.

The second overall goal of the chapter is the extension of the implementation concept for operational environmental information systems to include the inter-organizational level. Here, the necessity of company awareness regarding the potential of cooperation in overall inter-organizational sustainability is investigated. For this purpose, the basic conditions, and the needs and demands with respect to the inter-organizational exchange of environmental information are investigated. Finally, the question of the extent to which companies already use environmental information to support their sustainable activities is also considered.

## **Methodology**

An extensive literature review concerning the characteristics of environmental information and information systems and how they can contribute to sustainable development provided the starting point for this chapter. The results were then analysed with respect to their suit-

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