An innovation system perspective in environmental policy making – what is the added value?

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Environmental Policy have traditionally focused on separate links of the product chain rather than the whole value chain of products, and similarly, on specific policy measures rather than on combinations of measures selected from a system perspective. The aim of this paper is to present the experiences from a case study performed in order to investigate if an innovation system approach could add valuable knowledge in the development of policy instruments for sustainable production and consumption.

We use a newly developed analytical framework Sectoral Innovation Systems (SIS) approach in order to understand the current structure of innovation systems of dairy products and their dynamics. Ecologic milk, as opposed to conventional milk, serves as an example to identify the barriers and drivers of "greener" products. The innovation system around organic milk has developed during the past 15 years and organic milk is today a typical niche product, which only can be found in a limited number of dairy products. SIS is used s to describe the structure and functional pattern of the innovation system for organic milk. Six different functions of the system are studied and valued.[1]

An examination of the different functions points reveals a number of weaknesses, for instance direction of knowledge development, poor legitimacy, weak product development, lack of incentives for product development and insufficient market conditions. The analysis identifies blocking mechanisms in a systematic way and the results serves as a very useful basis for a discussion about the role of the state/government to promote the market penetration of a specific product or technology according to national goals. Based on the new insights a couple of key policy actions were suggested such as development of a clear national vision for ecological food products that combines environmental, consumer and growth policy objectives, establishment of a R&D institute for ecological production and processing, increased public procurement of ecological products and investigate/change the national marketing legislation.

The results show that innovation system analysis may have an important role to play in environmental policy making. Its major strength is that it takes into account all actors and networks that are instrumental in the development and growth of a product or technology with environmental or otherwise desirable properties. The holistic perspective provides new possibilities to identify and eliminate goal conflicts and to utilize synergies between different policy areas.

[1] What is hindering the market development of ecological milk in Sweden? The pilot study was made by Professor Staffan Jacobsson at Chalmers University, in cooperation with the Swedish EPA as a part of a governmental assignment on life-cycle approach in policy making. The study has been published (in Swedish) in SEPA report 5595, 2006.