Integrated method for extraction of environmental information from research reports

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Abstract

The contents of research reports of large research programmes are containing huge amount of environmental information at different levels of expression. Barriers of different interests and available time potentials are prohibiting efficiently the interdisciplinary exploitation of the information. Consequently, a huge amount of the produced information is not used for further research. These effects of information loss, and wasting of human resources is one of the critical factors in the development of knowledge in environmental research. Under consideration of these facts, a method was developed, integrating quantitative and qualitative methods for extraction of information from written reports. These method was applied for exploitation of reports from the Austrian Research Programme on Cultural Landscapes. Quantitatively the full texts are analysed by a bibliometric method (BibTechMon), with several outputs. On one hand it is possible to deliver databases about words and phrases, on the other hand it is possible to visualise the relations among the different words in a flexible way by word maps. The interpretation of the maps is made qualitatively by a linguistic approach in combination with hermeneutic analyses of interviews with selected authors. By combination of this methods it is possible to identify the meaning of word groups in relation to other word groups, independently of their disciplinary origin. With additional features of the software it is possible to identify in an integrative way information with was produced by several disciplines from separate viewpoints. So it is possible to find the interdisciplinary position of relevant terms and ideas from large research programmes.