



Use of geotextiles for mitigation of the effects of man-made hazards such as greening of waste deposits in frame of the conversion of industrial areas

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The city of Karlsruhe lays on the Rhine valley; however, it is situated at a certain distance from the Rhine river and the coastal front is not integrated in the urban development.

However, the port to the Rhine developed to the second largest internal port in Germany. With the process of deindustrialisation, industrial use is now shrinking. With the simultaneous process of the ecological re-win of rivers, the conversion of the industrial area to green and residential areals is imposed.

In the 1990s a project was made by the third author of the contribution with Andrea Ciobanu as students of the University of Karlsruhe for the conversion of the Rhine port area of Karlsruhe into such a nature-residential use. The area included also a waste deposit, proposed to be transformed into a "green hill".

Such an integration of a waste deposit into a park in the process of the conversion of an industrial area is not singular in Germany; several such projects were proposed and some of them realised at the IBA Emscher Park in the Ruhr area. Some of them were coupled with artistic projects.

The technical details are also subject of the contribution.

Studies were made by the first two authors on the conditions in which plants grow on former waste deposits if supported by intermediary layers of a geotextile. The characteristics of the geotextiles, together with the technologic process of obtaining, and the results of laboratory and field experiments for use on waste deposits in comparable conditions in Romania will be shown. The geotextile is also usable for ash deposits such as those in the Ruhr area.