



# Czech - German workshop on restoration after mining activities

## České Budějovice 14 - 16 September 2009

In February 2009, the working groups of Sabine Tischew (Anhalt University of Applied Sciences, Germany) and of Karel Prach (University of South Bohemia, Czech Republic) started the bi-national project "Utilisation of near-natural re-vegetation methods in restoration of surface-mined land". The three-year project is financed by the Deutsche Bundesstiftung Umwelt (FKZ 26858-33/2).

In the course of the project, the first workshop has taken place in České Budějovice. The main topic was restoration of psammophytic grasslands in sand pits. Since this vegetation type has become very rare and fragmented in this region, it is most important to support the establishment of this vegetation type on suitable new sites such as sand pits. We used raking as a method to harvest seeds and cryptogam material (Stroh 2006, Jeschke 2008). Although some target species may locally establish spontaneously (Řehouňková & Prach 2008), raking probably speeds up the process substantially and includes more species



Aleksii Redchenko   Sabine Tischew   Annett Baasch   Klára Řehouňková   Anita Kirmer   Karel Prach

The raking team   Alexandra Bernardová

This method proved to be very easy to handle and we raked 250 m<sup>2</sup> with 5 colleagues in 4 hours and gathered almost 1000 litre of material. On donor sites, relevés were made by Karel Prach and an inventory of lichens by Aleksii Redchenko. The experimental trial was implemented on an island within the active sand pit Suchdol nad Lužnicí of the mining company Českomoravský štěrk a.s. (Heidelberg Cement Group).



Karel Prach, making relevés



Left to right: Annett Baasch, Alexandra Bernardová & our lichen specialist Aleksii Redchenko



The receptor site: Klára's Island

Three variants (control, two different types of donor sites) were realised in complete block design with 5 replicates. We used a ratio of 1:1 for donor and receptor sites.



The ferry



Distribution of raking material



Overview trial

In the evenings, we enjoyed the wonderful old town of České Budějovice and “tested” some pubs for the SER conference in 2012.

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České Budějovice, market square

### *Aims of the project*

*The aims of the project are to find and formulate common colonisation and succession mechanisms occurring in the context of regeneration of European surface-mining areas and to develop general strategies for near-natural acceleration of vegetation development. Therefore, demonstration trials with practical relevance for both spontaneous succession and assisted site recovery will be utilised or implemented in co-operation with mining companies in both countries. In addition, old and new knowledge will be summarised in a handbook "Guidelines for best practise methods in ecological restoration of mined sites" in English and Czech language. Comparable to the Handbook near-natural re-vegetation of raw soils (Kirmer & Tischew 2006), this handbook will enhance knowledge transfer into practice by giving concise guidelines for successful ecological restoration being applicable over the European coal-mining and sand-gravel extraction districts.*

### References:

- Jeschke, M. 2008: Einfluss von Renaturierungs- und Pflegemaßnahmen auf die Artendiversität und Artenzusammensetzung von Gefäßpflanzen und Kryptogamen in mittel-europäischen Kalkmagerrasen. PhD thesis, TU Munich
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- Stroh, M. 2006: Vegetationsökologische Untersuchungen zur Restitution von Sand-Ökosystemen. PhD thesis, TU Darmstadt