

***Carbon credits from peatland rewetting. Climate – biodiversity – land use* by Tanneberger F., Wichtmann W. (eds), Schweizerbart Science Publishers, Stuttgart, 2011; XII + 223 pp., illustrations, tables**

Peatlands cover about 3% of the Earth's land surface, but they store resources of carbon ten times bigger than all the forest ecosystems of our planet. It is estimated that drained and degraded peatlands cover less than 0.5% of the land surface, but they let out into the atmosphere about 6% of the anthropogenic emission of CO<sub>2</sub>. This refers mainly to South-East Asia and Europe, where peatlands have been significantly transformed and some of them disappeared irrevocably.

The book discussed is a result of scientific research and works with practical applications conducted within an international pilot project "Restoring peatlands and applying concepts for sustainable management in Belarus, a climate change mitigation project with economic and biodiversity benefits", which was based on other enterprises of such organizations as UNDP/GEF and UNEP/GEF. The participants of the project were mainly scientists from Germany and Belarus, with a co-participation of several people from Great Britain, Holland, Poland, the USA and Ukraine. The authors of the publication tried in the first place to attract attention to the significance of peatlands in the forming of the landscape biodiversity level and especially to their role in the emission of greenhouse gases. The aim of the work was also to make an attempt to define the common ground between environment

protection and economics, which two fields, in the authors' opinion, only too often do not go hand in hand.

The work consists of the following ten main chapters: *Introduction, Peatlands in Belarus, Peatlands and climate, Peatlands and biodiversity, Driving forces and funding options, Land use options for rewetted peatlands, The BMU-ICI project, Practical rewetting examples, Recommended research and monitoring activities in rewetted peatlands Acknowledgements.*

The authors of the first four chapters present the main assumptions of the book and the scientific bases related to the functioning of peatlands and to their importance for the biodiversity in the aspect of climate changes. The chapter of particular importance is the third one, *Peatlands and climate*, where the authors present issues connected with the emission of greenhouse gases from peatlands, the methods of measuring it and forecasting changes in the flora in different scenarios of the area irrigation. It is also worth paying more attention to chapter 4, *Peatlands and biodiversity*, whose content both acquaints the reader with the natural value of peatlands and introduces the subject of restoring peatlands as one of the more important factors of balanced development.

The next two chapters, which present the legal basis and the sources of financing projects connected with peatland restoration, are also very interesting. It seems a great idea to include wetlands into the world greenhouse gas emission bank, which allows to draw financial profits from pollution reduction achieved thanks to restoring peatlands. It is especially visible in chapter

6, *Land use options for rewetted peatlands*, where the authors convince us about the benefits of using the peatland biomass as raw material in food and energy industries and in agriculture.

The final main chapters contain a description of the BMU-ICI project, as well as specific restoring solutions of particular Belarusian peatlands, taking into account scientific research and further monitoring of the chosen objects. There are six objects presented where restoration measures were taken, including, among others, the construction of dams preventing excess water outflow and seeping out from peatlands. It should be added that all the objects were submitted to insightful scientific research allowing to define in detail the water circulation in their drainage areas.

The initial results suggest the right choice of restoration methods, which is reflected in the coming back of plant species characteristic for natural ecosystems to the habitats which were previously degraded.

At the end of the publication we can find a bibliography with several hundred entries, a name index of the participants of the project and a glossary.

The book is recommendable both to scientists studying peatlands and decision makers in the broadly understood space planning and environment protection in the era of the balanced development, which is so popular these days. The content of the publication brings us closer to understanding the way in which peatland restoration may influence the cycling of substances in the nature, especially in the case of greenhouse gases. What is especially valuable are those aspects of the book which prove that the activities concerning environmental protection may have some common ground with the economical development of a given country or area.

A huge advantage of the publication discussed is its graphics, including clear tables and illustrations and colourful photographs of very good quality.

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