

## Final Report: Senior Research Stay at Freie Universität Berlin

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Environmental management of land resources and assessment of  
anthropogenic impact on the soil in the context of sustainable development

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I have gotten invaluable experience during my stay at the Freie Universität Berlin. I had been exchanging opinions with colleagues and studying scientific literature, in particular the articles about the sustainable development, written by colleagues working in a group under the guidance of Prof. Dr. Brigitta Schütt. The articles are devoted to assessing the degree of the natural resources degradation, such as forest, soil, water resources as a result of anthropogenic impact. I was especially interested in the research on assessing the global impact of land changing of its using on the soil erosion as well as on the impact of the deforestation on soil loss due to water erosion.

I communicated and exchanged experience with colleagues discussing the organization of the learning process and field practices at Freie Universität Berlin. Moreover, I studied some information about master programs, for example, about the program “Integrated Water Resources Management for Central Asia” at the German-Kazakh University in Almaty, Kazakhstan. Colleagues told me about the unique experience of the creating this master's program, during which students from the different countries of middle and central Asia study together. These countries are united by a shortage of water resources, thus students receive an education that will be vitally necessary in their countries.

I have talked with colleagues who came to Freie Universität Berlin for an internship cooperation from other countries during my 3 weeks stay. Therefore, it was possible to exchange the latest trends in the soil disturbance assessment methods with Dr. El Sayed Said Mohamed (Associate professor in National Authority for Remote Sensing and Space Sciences (NARSS)) from Egypt.

We have exchanged and shared experience in educational and scientific activities with colleagues, and we planned the creation of new research projects.

My colleagues from the Geoecology group and me have identified common scientific interests. This group is managed by Prof. Dr. mult. Dr. h. c. Konstantin Terytze and is engaged in the environmental geochemistry, the study of soil pollution, soil cleaning methods, including using biochar, as well as environmental laws and regulation.

My primary contact person was Prof. Dr. Brigitta Schütt. Furthermore, I was privileged to meet new colleagues from Department of Earth Sciences. It helped me to expand my research network and to share most recent trends in the field. Current and future research projects have been discussed with:

Prof. Dr. Brigitta Schütt - Physical Geography;

Prof. Dr. Tilman Rost - Physical Geography;

Dr. Ines Vogel -Geoecology

Dr. Dmitri Drabkin - Geoecology;

Dr. Ursula Weiß - Geoecology.

I have explored methods of anthropogenic impacts on soils assessing which I am going to use in my future research.

Education at all levels for the sustainable development is also one more topical subject I have studied in Freie Universität Berlin. A lot of information that I learned during my stay I am going to use in my SPbU lessons and workshops, for instance for Resources Science and Soil Ecology. I have understood the competence of the sustainability more clearly and concrete during my stay. A lot of ideas and new plans have appeared for realizing future projects and creating new scientific papers.

Some papers were collected and applied for the competition of the new project in order to support first steps of the cooperation between Freie Universität Berlin and Saint Petersburg State University: "Management of the soil resources sustainable development: assessment and elimination of soil degradation impacts as a result of the activities of the various industries in the terms of legislation and standards peculiarities of soil protection in Russia and Germany".