Phytoremediation research using poplars and willows in Serbia

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This paper presents review of research related to the use poplars and willows for phytoremediation conducted at the Institute of Lowland Forestry and Environment from 2003 till now. Research started first with nitrates and heavy metals Cd, Ni and Pb. First screenings were done with larger number of different poplar and willow genotypes in order to select best candidates for further work. Experiments were conducted in greenhouse with hydroponically grown plants on different concentrations of contaminants. Screening resulted in selection of four poplar and five willow genotypes with high potential for phytoremediation. Afterwards research started in 2006 included phytoremediation of crude oil contaminated soils with use of poplars and willows. The aim of this research is to investigate potential of selected clones for growing on this soils and stimulating of petroleum degrading microorganisms. Nowadays phase of research moved to field experiments with artificially contaminated soils which are still in progress.