

Landscape Management in the Emergency Hazard Planning Zone of the Nuclear Power Plant Temelin: Preventive Improvement of Landscape Functions

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Abstract : The experience of radiological contamination of land, especially after the Chernobyl and Fukushima disasters have shown the need to explore possibilities to the capture of radionuclides in the area affected and to adapt the landscape management to this purpose ex -ante the considered accident in terms of prevention. The project, Minimizing the impact of radiation contamination on land in the emergency zone of Temelin NPP' (2012-2015), dealt with the possibility of utilization of wetlands as retention sites for water carrying radionuclides in the case of a radiation accident. A model artificial wetland was designed and adopted as a utility model by the Ministry of Industry and Trade of the Czech Republic. The article shows the conditions of construction of designed wetlands in the landscape with regard to minimizing the negative effect on agricultural production and enhancing the hydrological functionality of the landscape.

Keywords : artificial wetland, land use/ land cover, old maps, surface-to-water transport of radionuclides

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