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## Some Aspects of the Impact of Photovoltaics Plants on the Environment

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### Abstract

In anticipation of the approaching end of exhaustible energy reserves, in the context of ever higher needs for electricity production, in the framework of the transition to a circular economy and achieving the goals of sustainable development, the issue of energy supply is becoming more and more closely related with renewable energy sources. These investment intentions bring with them a huge ecological problem, namely the construction of photovoltaic parks on very large areas of really valuable natural territories - protected areas, agricultural lands and pastures, even dams. The impact of photovoltaic plants, located out of urbanized areas, can be summarized as follows: loss of habitats, barrier effect to wildlife, disruption of soil layers, ground cover induced by the panels (shading, rain regime change, erosion due to runoff), changes in the abiotic factors of the environment. By covering the soil with solar modules, the amount of precipitation (rain, snow, dew) is reduced. This can lead to surface drying of the soil. When large PV modules have been used, run-off rainwater can lead to soil erosion, especially during heavy rainfall, mainly in installations on slopes and exposed soils where water does not absorb well. The heating of the modules in large photovoltaic plants can lead to an impact on the local microclimate, e.g. heating of the adjacent territory or convection. In the case of small and large mammals, there is a complete loss of habitat as a result of the fencing of the production site.

**Keywords:** agricultural land, biodiversity, soil degradation, solar plants