

The Analysis of Photovoltaic Potential by Means of GIS in Model Area

Abstract

The aim of the thesis is to investigate the issue of the photovoltaic utilization by means of tools of GIS. The teoretical part deals with photovoltaics, the photovoltaic effect, basic conditions and laws that need to be met in order to build a photovoltaic power station and the development and tools of GIS with special intend on Area Solar Radiation. The model is implementated in three test areas in the Czech Republic. The metodology uses tools of GIS in software environment ArcGIS Desktop, an open source application PVGIS and the ČHMÚ database.

Keywords: Photovoltaic, Photovoltaic Power Station, GIS, Model, Area Solar Radiation