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Environmental impact assessment of renewable energy installations on agricultural land overlapping with protected natural areas of community interest in Timis County

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Abstract: *The location of installations for the production and use of energy from renewable sources is constantly increasing, so investment projects are proposed to be carried out on large areas of agricultural land, Timis County having considerable areas.*

• Introduction

In Europe, the share of energy from renewable resources in gross final consumption should be above 30% by 2030. Before being implemented, national energy projects go through a complex environmental impact assessment process, following several defining elements, namely the identification and assessment of their potential effects on agricultural land, especially if they are located in protected natural areas, in terms of their impact on biodiversity. At the same time, the positive aspects that the use of renewable energy brings to the reduction of greenhouse gas emissions are also taken into account. At the same stage of the analysis, measures to prevent, avoid and reduce impacts are identified.

In the present study, a representative sample of projects for the establishment of photovoltaic parks and their connection to the national system, in the period 2021-2023, was analysed at the level of Timis County, whose location overlaps entirely or partially with protected natural areas of community interest.

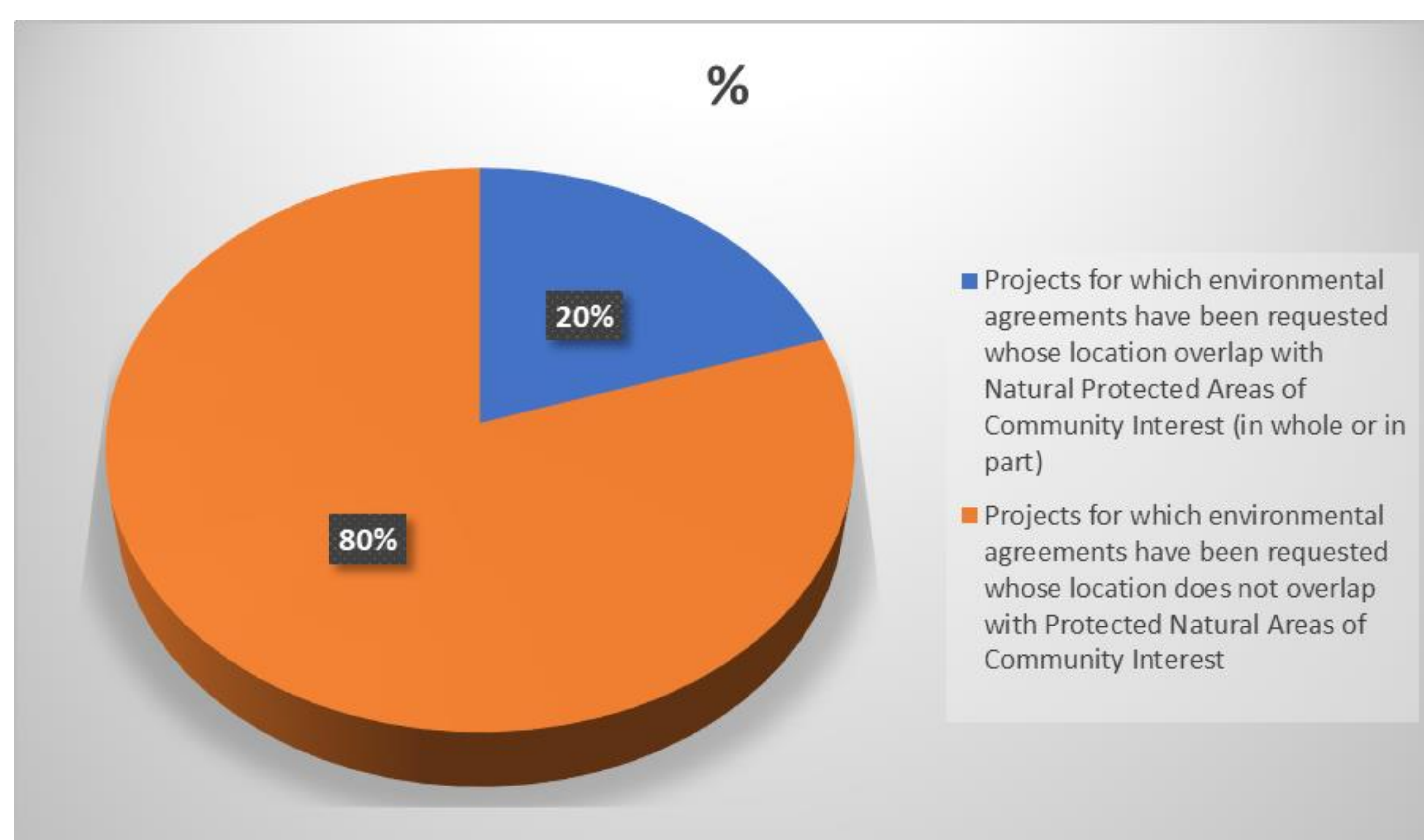
• Material and method

Energy production projects are part of Romania's large projects of major interest, along with transport infrastructure, non-renewable resource extraction, planning or development projects. For projects that overlap in whole or in part with protected natural areas of community interest, an appropriate assessment of their potential effects on these areas is carried out.

Appropriate assessment is a comprehensive process to ensure the integrity of protected areas of community interest.

The stages of the study include: identification of potentially affected protected areas of community interest; identification of potentially affected habitats and species; identification of impact types; quantification of impacts; assessment of impact significance; proposal of measures to prevent, avoid and reduce impacts; monitoring and implementation programme; identification of alternative solutions for carrying out projects (if significant impacts cannot be avoided or reduced); identification of compensatory measures if residual impacts are significant and alternative solutions cannot be identified.

• Results and discussions



• Conclusions

1. The result of the appropriate assessment of the projects analysed showed that the implementation of the projects will not lead to: reduction or loss of areas covered by habitats of community interest, reduction or loss of feeding, breeding and resting habitats for fauna species of community interest, reduction of species population numbers or behavioral changes.
2. The assessment of the significance of the impact of these types of projects is insignificant impact, following the application of the prevention, avoidance and mitigation measures established for the specific conservation objectives of protected areas of community interest.