Dynamic Geodiversity, Geosystem Services, and Sustainable Development: Insights from Sesia Val Grande UNESCO Global Geopark

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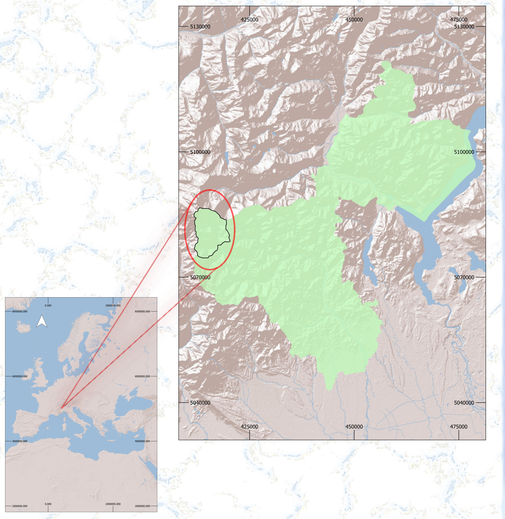
1. INTRODUCTION

Geodiversity is a concept that is gaining popularity in the scientific community. Geodiversity, like biodiversity, is part of natural capital and can provide benefits to human communities: Geosystem Services. Because of its importance, it is necessary to conserve and promote the geodiversity. The UNESCO Global Geoparks are a powerfull tool to recognise the importance of the geodiversity and to promote Geoconservation, Education, and Geotourism within the territory. In particular, the current global climate change requires more and more attention to geodiversity and geoheritage conservation, in order to protect the geosystem services.

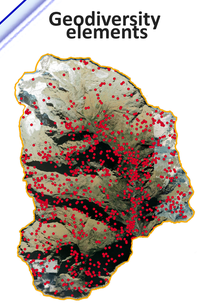
In this study we explore a new approach in an attempt to provide targeted responses to the needs of the territory, with the aim of promoting geodiversity conservation and sustainable development

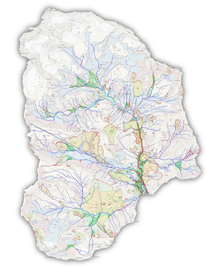
3. CASE STUDY

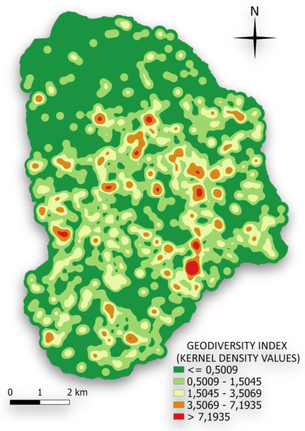
Alagna Valsesia - Sesia Val Grande UGGp

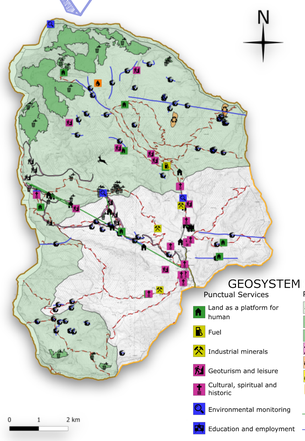


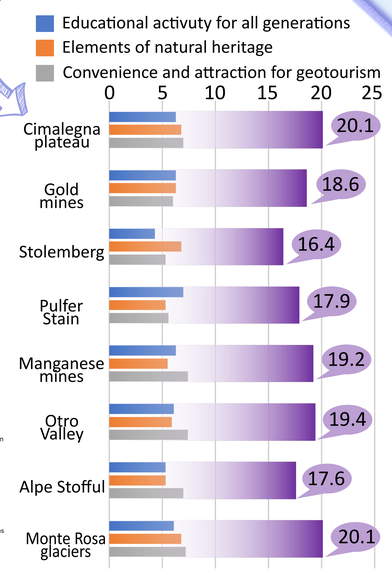
4. RESULTS



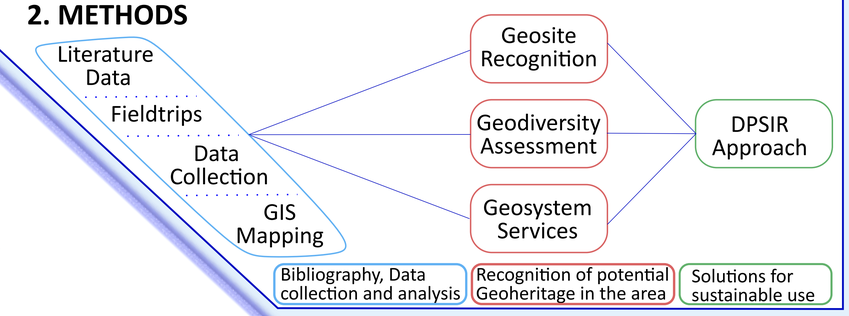




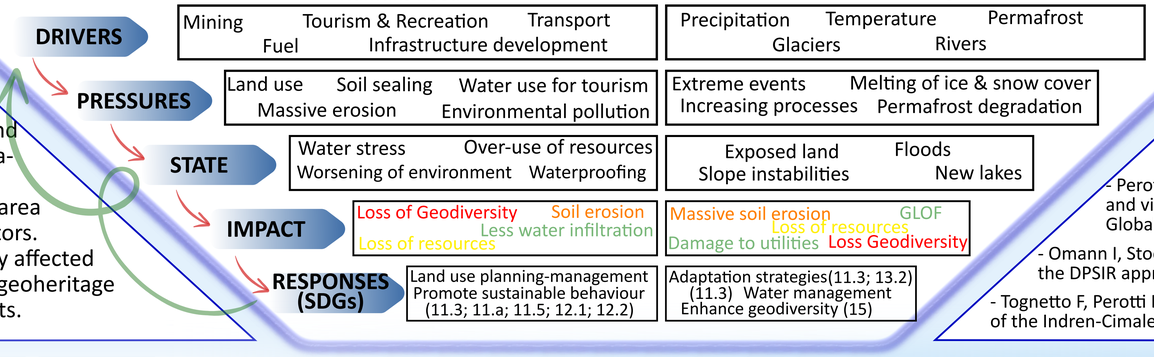




2. METHODS



DPSIR



5. CONCLUSIONS

1. Alagna Valsesia is a municipality within the Geoparks and claims to be a place of great geodiversity, especially into the valley.
2. Geodiversity provides all 5 types of geosystem services, especially regulating services.
3. The evaluation of the geosites shows 8 geosites in Alagna Valseisa with a great potential for geotourism, especially in the glacial and proglacial environment.
4. The DPSIR Framework allows to locate the global drivers of change and to identify the action needed to mitigate the impacts.
   In Alagna Valsesia we identified impacts on all the geosystem services, with a mention on loss of geodiversity and massive erosion (caused mainly by more frequent landslides and extreme precipitations). With DPSIR we can suggest the responses linked to the SDGs

6. FUTURE WORKS

This study has shown that the DPSIR framework is a good investigative approach to identify actions needed for sustainable land development that enhances geodiversity, but also enables climate change mitigation strategies.

Future work will aim to assess the actual climate change in the area through the calculation of climate indices and the use of indicators.

It will then be necessary to identify geosites that are particularly affected by climate change in order to develop strategies to protect the geoheritage and enhance its value in order to raise awareness among tourists.

7. REFERENCES

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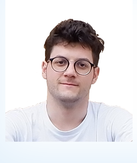

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