



## **The GeoDIVE project for enhancing geodiversity of the Piemonte Region (Italy): “From rocks to stones, from landforms to landscapes”**

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When looking for methodological solutions on geodiversity and geoheritage enhancement, we have to face some problems: a) difficult legibility of the information on regional geodiversity produced by Earth scientists through Data Infrastructures; b) lack of public recognition on most relevant “geological” goods and services provided to society.

For solving these problems, the geoDIVE project proposes a “full immersion” into geodiversity of the Piemonte Region. Its overall methodology is a blend of Earth Sciences and ICT for achieving both general and specific objectives by means of a four step approach. The general conceptual and methodological framework can be synthesized on a series of modified McKelvey boxes, where the relationships between Earth’s resources and reserves have been translated to Geodiversity and Geoheritage and each operational activity on Earth Science knowledge is outlined by a progressive focus (Geodiversity to Geoheritage) and detail (regional to local) of analyses:

1) Definition of concepts and reproducibility of data interpretation on geodiversity, on the total Earth resource of the Piemonte Region. By operating with the semantic tools of the Ontogeonous initiative in the database of the CNR-IGG GeoPiemonte Map we overcome difficulties related to the organization of information of present and future knowledge on geodiversity (identified + undiscovered).

2) Selection of encoded knowledge for analysing geodiversity role in generating Geoheritage. We operate within a “geosystem service approach”, conducting field mapping and assessment on selected sites of the Piemonte Region, in agreement with regional and local environmental agencies for fostering exploration of hypothetical geodiversity and restoration of conditional geodiversity.

Successive steps of project development surfed surf out new solutions for promoting awareness on geodiversity and best management of geoheritage, from local to regional scale, from technical to general contents:

3) Implementation of targeted user-centered multidisciplinary tools and their applications on selected geoparks and geosites according to the Operational Guidelines for the Implementation of the UNESCO World Heritage. Focus is on the improvement of understanding and awareness of the multiple dimensions (space, time) of geodiversity as relevant components of cultural landscapes.

4) Dissemination of a comprehensive multidimensional/crossmedial approach to geodiversity and geoheritage of the Piemonte Region by selection and promotion of best practices in sustainable use of georesources and proper management of geoheritage.

By integrating Earth science and environmental knowledge, thanks to the cooperation with local stakeholders, parks and schools, the geoDIVE project is starting an adaptive learning process on geodiversity values.