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PRELIMINARY DATA OF A PROPOSAL FOR A FUTURE AROUCA GEOPARK EXTENSION: THE “MONTEMURO AND GRALHEIRA” TERRITORY

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The "Montemuro and Gralheira" territory is a mountainous region corresponding to the municipality of Arouca and six neighboring municipalities: Castelo de Paiva, Cinfães, Castro Daire, Vale de Cambra, S. Pedro do Sul and Sever do Vouga, covering a total area of 1,690 km² with about 127 thousand inhabitants (Census 2011).

The geodiversity of the "Montemuro and Gralheira" territory is dominated by metasedimentary and magmatic Palaeozoic rocks (550-245 Ma) and also recent sedimentary rocks (<2Ma) (Sá et al., 2009) (Fig. 1).

Fig. 1 – Geological simplified map of “Montemuro and Gralheira” territory.

The "Montemuro and Gralheira" territory integrates four Natura 2000 Sites: Montemuro Mountain, Paiva River, Freita and Arada, and Vouga River. Concerning the cultural heritage, there are 60 protected properties (10 National Monuments, 40 Public Interest buildings, 1 Monument of Public Interest and 9 Municipal Interest buildings).

The inventory of geological heritage of "Montemuro and Gralheira" territory is the aim of the first author doctoral thesis, to be held at the University of Trás-os-Montes and Alto Douro. The inventory methodology to be adopted include: i) bibliographical review, ii) definition of the thematic frameworks, iii) fieldwork to identify and assess geosites, iv) meetings with local authorities. The geosite assessment procedure uses a quantitative methodology to evaluate the
most vulnerable geosites. At the same time, this evaluation will also allow to estimate the potential educational and tourism uses.

Preliminary data have identified already some sites with geological relevance (Fig. 2).

Fig. 2 – Examples of sites with geological relevance in the "Montemuro and Gralheira" territory: a) Braçal Mines, Sever Vouga; b) Cabreia Waterfall, Sever Vouga; c-d) Montemuro Doors, Cinfães; e) Spa Queen D. Amelia, S. Pedro do Sul; f) Spa Carvalhal, Castro Daire.

The "Montemuro and Gralheira" territory presents a very rich natural and cultural heritage with emphasis on the geological heritage. Successive territorial development strategies are being implemented by the LAG – ADRIMAG (territorial development agency), focusing on the usufruct, enhancement and promotion of these resources. The possible extension of the Arouca Geopark territory to the "Montemuro and Gralheira" territory could be a decisive contribution for the sustainable development of this region.

References: